

CLIMATOLOGICAL DATA FOR NOVEMBER, 1913.

DISTRICT NO. 3, OHIO VALLEY.

PROF. FERDINAND J. WALZ, District Editor.

GENERAL SUMMARY.

The month as a whole was remarkably warm for November throughout the entire district. There was some unusually cold weather, however, during the first 12 days, and especially in the period 9th-12th, when remarkably low temperatures for so early in the season were registered over the district, a temperature below zero being recorded at one station in West Virginia and temperatures considerably below freezing in practically all sections. Over the northern portion of the district the month was also unusually wet, while over the southern half it was decidedly dry, the deficiency in precipitation being marked from southern Kentucky southward to the southern border, and the excess large over much of Ohio and the upper basin of the Ohio River.

There was excessive cloudiness and deficient sunshine over nearly all of the district, and after the 12th a notable absence of wintry conditions which obtain so frequently during the latter half of November. The warm, moist weather was highly favorable for grass, and pastures by the end of the month had become green as in springtime. The weather was remarkably springlike over the northern part of the district, and as a result at the end of the month wild flowers had begun to bloom in Indiana and Illinois and dogwood and plum trees were reported to be in full bloom in Indiana, a condition almost unprecedented over these northern States at that time of year.

The most important feature of the month was the severe snowstorm which, attended by high winds, swept over the northeastern portion of the district from eastern Indiana and northern Kentucky to the crest of the Alleghanies and northward to the Lakes, on the 9th-10th. The storm was especially severe over Ohio and portions of West Virginia and western Pennsylvania. It was the most severe snowstorm for the time of year on record in Ohio, and ranks among the severest for any month in the past history of this region. Transportation lines and electric service were seriously impeded for several days, and mail service and lines of communication were interrupted. Two lives were lost near McGrawsville, Miami County, Ind., due to this storm.

The more important general storm formations passing over or affecting the weather conditions of the Ohio Valley during the month were: (1) A well-developed disturbance crossed the Rocky Mountain region on the 6th, and by the morning of the 7th, deepening as it advanced, occupied the central States west of the Mississippi River. With the center of lowest barometer over Minnesota, it extended in a rather deep trough to northern Texas. During the 7th and 8th the formation drifted slowly eastward, the path of the main center crossing the Lake region, and by 7 p. m. of the 8th was located north of Lake Erie. At the same time another storm center appeared off the Carolina coast, and by the morning of the 9th the two disturbances coalescing formed a storm of remark-

able strength, centered about Chesapeake Bay, and thence moved northward to the lower Lakes during the 9th-10th and on down the St. Lawrence Valley. This storm was attended by destructive winds and remarkably heavy snowfall. (2) During the 13th-14th a shallow depression extended through the Ohio Valley attended by general rains, although the barometer readings were considerably above normal. This trough was broken into by a peak of higher pressure extending down from a high area over the Lakes in the afternoon of the 14th, but by the morning of the 15th another low formation had developed over the central Mississippi Valley, and over-spreading the Ohio Valley during the 15th and morning of the 16th, caused a continuation of general rains over the district; and (3) a well-defined low-pressure formation which appeared in the Southwest the morning of the 29th moved slowly northeastward attended by general rain over the central valleys, and in the evening of the 30th was still centered over the central Mississippi Valley.

The following table summarizes the chief features of meteorological interest for the several sections of the district:

Portions of States included in the Ohio River Basin.	Temperature.				Precipitation.					
	Average.	Departure.	Highest.	Lowest.	Average.	Departure.	Greatest monthly.	Least monthly.	Greatest in 24 hours.	Average number of days.
New York.....	42.8	+4.9	72	18	3.02	-0.30	3.93	2.30	1.83	13
Pennsylvania.....	43.1	+2.5	79	10	3.52	+0.71	4.34	2.07	2.21	13
Maryland.....	40.4	+2.1	73	10	4.15	+1.74	4.38	3.94	1.87	12
West Virginia.....	44.4	+2.0	82	-1	4.58	+2.00	4.83	0.61	2.50	10
Ohio.....	44.5	+3.5	78	2	3.77	+1.10	5.21	1.86	2.00	11
Indiana.....	45.0	+5.3	80	11	4.21	+0.94	6.12	2.05	2.40	12
Illinois.....	49.5	+6.0	80	12	4.49	+1.16	6.38	2.80	1.97	10
Kentucky.....	50.5	+4.6	81	8	3.25	-0.20	6.12	0.83	3.20	9
Tennessee.....	51.7	+3.7	80	8	1.49	-2.00	2.58	0.37	2.04	4
Alabama.....	53.3	+2.5	81	18	1.34	-1.89	1.90	0.91	1.25	4
Georgia.....	45.0	-1.3	75	17	0.13	-	-	0.08	0.08	4
North Carolina.....	46.2	+1.5	76	12	1.67	-2.09	2.50	0.81	1.80	4
Virginia.....	44.9	+2.1	76	10	1.72	-0.89	2.70	1.13	1.50	4

TEMPERATURE.

The month opened cold, the cold weather which had so largely prevailed during the latter half of October continuing through the first two days of November when temperatures were from 5° to 12° or more below normal, with minimum temperatures generally below freezing and registering between 10° and 20° at stations in the northern portion of the district and in the mountain regions of the eastern and southern sections. A return to normal conditions occurred about the 3d and temperatures above normal largely prevailed on the 6th and 7th. Another cool wave, however, set in about the 8th and continued until the 11th, during which time the average daily temperatures were from 10° to 20° below normal and minimum temperatures for the various sections ranged generally below 20° and down as low as -1°. This cold

period was unusually severe for so early in the month, and while no minimum temperature records for November were broken, it is probable that record temperatures for the first half of November were equaled at many stations.

Unusually high temperature for November set in on the 12th and continued during the rest of the month, the warm weather being especially pronounced from the 19th to 22d and 27th to 30th. Maximum temperatures ranging from 70° to 82° were registered in all the sections during the first of these periods, and these days rank among the warmest November days, especially in the northern portion of the district, for which there is a record. The warm, moist weather over the northern sections was beneficial to winter wheat but delayed the gathering of corn. At the close of the month some foliage that had been killed by the October frosts was growing again, and in some localities fruit trees were reported budding.

PRECIPITATION.

Precipitation was below normal over southern Kentucky, Tennessee, southwestern Virginia, western North Carolina, and the northern portions of Alabama and Georgia, where the amounts at the various stations were generally less than 3 inches and in the main ranged from 2 inches to less than 1 inch. It was above normal for November over northern Kentucky, over sections north of the Ohio, over West Virginia and a large portion of western Pennsylvania, where the amounts ranged generally from 3.5 to 8.5 inches. The large amount for the month over the northeastern portion of the district was mainly due to the heavy snow of the 9th-10th. In Tennessee while precipitation for the month was small in amount it was fairly well distributed over the State and, coming at favorable intervals, was beneficial.

Over Kentucky and the northern portions of the district, including West Virginia, there was much cloudy, gloomy, rainy weather after the first week. The more important periods of precipitation were the 7th-10th, 13th-16th, 23d, and 26th-30th. Precipitation was general over the entire district on the 8th, 9th, 10th, 16th, and 30th.

Snowfall was unusually light in Illinois and over the western portions of Indiana, Kentucky, and Tennessee, but was unusually heavy for November over the northeastern portion of the district, due to the severe snowstorm of the 9th-10th which swept over those sections. The snowfall of this storm was remarkably heavy, measuring from 3 to 36 inches over portions of Ohio, West Virginia, and southwestern Pennsylvania, and being attended by high winds ranks among the most severe snowstorms that have ever occurred over those sections. The following are extracts from reports of section directors in those States:

An unprecedentedly heavy snowfall occurred on the 9th and 10th in the Ohio Basin. This snowfall was generally heaviest from Pittsburgh southward, and traffic of all kinds suffered severely in those districts. In some instances trains were delayed for 24 hours or more and the passengers visited near by farm houses to secure provisions. Many telephone, telegraph, and electric-light wires were blown down and large sections of towns and cities were temporarily isolated and in darkness, and interurban trolleys were put out of commission on many lines. These conditions seemed to be worst in the Beaver Valley, where the winds were apparently highest.—Geo. S. Bliss, Section Director, Philadelphia, Pa.

By far the greatest snowstorm of record for the season occurred on the 9th-10th. West of the crest of the mountains the falls ranged generally from nearly 1 foot to more than 3 feet. The fall at Parkersburg was 15.9 inches. The total of the November falls for the previous 25 years for Parkersburg is but 23.8 inches.—H. C. Howe, Section Director, Parkersburg, W. Va.

The snowfall of the month was much above normal in all but a few of the western counties, and it practically all occurred on the 9th and 10th. The snowstorm on the 9th and 10th was by far the heaviest for the time of year on record in Ohio, and likewise it was one of the heaviest on record for any month of the year. The fall was heaviest in the Muskingum Valley, where it ranged from 10 to 25 inches, and it gradually decreased toward the southwest. At Cincinnati it was only 0.8 inch.

The storm was preceded on the 8th by a steady fall in temperature and brisk northwest winds. The snow began to fall early on the morning of the 9th and continued steadily throughout the day and following night. High west and northwest winds prevailed throughout the 9th and 10th which piled the snow into high drifts in the streets, roads, and railroad cuts. Traffic was badly interrupted on nearly all roads in the State and in some localities in eastern Ohio it was completely stopped for a day or more.

Rural mail carriers were unable to make their trips for several days, and the inability of milkmen to deliver milk to their customers caused much inconvenience. In some instances cars loaded with live stock were snowbound and the stock was compelled to suffer in open cars. On many farms stock, especially sheep, were caught out in the fields and suffered severely before they could be gotten to shelter.—J. Warren Smith, Section Director, Columbus, Ohio.

A severe wind and snow storm began on Saturday night, November 8, and continued through Sunday and the early part of Monday. Considerable snow fell at points in the northern part of the State, but elsewhere the amounts were heavy in only a few localities. Railroad traffic was much delayed in the northern part of the State, and the storm, together with the cold weather, caused considerable suffering among the poorer classes. The snow remained on the ground but two or three days.—V. H. Church, Section Director, Indianapolis, Ind.

MISCELLANEOUS.

Thunderstorms occurred in Tennessee on the 1st, 2d, and 3d; in Illinois on the 7th; in Kentucky, Tennessee, and Indiana on the 7th and 8th; in West Virginia on the 12th; in Ohio, Indiana, and Illinois on the 13th; in West Virginia, Ohio, Indiana, and Illinois on the 14th; in Illinois and Indiana on the 22d and 28th; and in Tennessee, Kentucky, Illinois, and Indiana on the 30th.

Fog was notably prevalent at frequent intervals during the month, but especially from the 27th to the 30th, inclusive, in West Virginia, Ohio, and the portions of the other States bordering on the Ohio River. At many places the fog and smoke were so dense that navigation on the Ohio had to be suspended. The cooperative observer at Madison, Ind., states:

On the 27th and 28th fog and smoke enveloped this section the entire day, obscuring all traces of the sun, and becoming so dark that it was difficult to see objects but a short distance away. Navigation on the Ohio was stopped, artificial lights were necessary in the houses and in the streets during all of the two days. In its impenetrability and length of duration the fog surpassed any in the memory of the oldest inhabitant.

RIVERS.

The rise in temperature which followed so soon after the heavy snowfall of the 9th-10th, rapidly melting the snow, together with the copious rains of the 14th-16th, caused flood stages in the upper tributaries of the Ohio River and at a few points in the upper reaches of the main stream, but no serious damage was caused by the floods.

The Tennessee and Cumberland Rivers were at low stages throughout the month; also the Wabash system of rivers and the larger rivers of Kentucky were at low or moderate stages during the month.

TABLE 1.—Climatological data for November, 1913. District No. 3, Ohio Valley.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky.				Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelting.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.		Number of overcast days.	Prevailing wind direction.
New York.																			
Allegany.....	Cattaraugus.....	1,441	7	43.5	.....	73	21	21	6	47	3.93	.....	1.83	3.2	20	5	6	19	C. E. Whitney.
Bolivar.....	Allegany.....	1,800	19	42.0	+ 4.9	68	21	18	6	48	2.30	- 0.30	0.92	T.	8	4	6	20	C. F. Hoffman.
Olean.....	Cattaraugus.....	1,402	5	.....	.....	.....	.....	.....	.....	.....	2.82	.....	0.78	T.	12	.....	.....	.....	John W. Alles.
Pennsylvania.																			
Aleppo.....	Greene.....	1,138	12	43.4	+ 2.3	71	21†	11	12	43	2.07	+ 0.18	1.00	18.0	7	14	3	13	J. S. Hinerman.
Baldwin.....	Butler.....	1,404	7	41.2*	.....	69*	21	18	11	38*	2.60	.....	0.60	9.0	10	10*	3*	16*	S. H. Templeton.
Beaver Dam.....	Beaver.....	674	19	.....	.....	.....	.....	.....	.....	.....	2.73	+ 0.03	1.39	.....	13	5	1	24	U. S. Engineer.
Brookville.....	Jefferson.....	1,173	22	44.1	.....	76	21	18	9	46	3.00	- 0.22	0.56	.....	16	.....	.....	.....	H. C. Bartholomew.
California.....	Washington.....	770	10	43.2	+ 0.4	73	20	17	12	41	3.65	+ 2.11	2.21	13.0	9	12	4	14	W. T. Fiske.
Clarion.....	Clarion.....	1,078	28	.....	.....	.....	.....	.....	.....	.....	3.58	+ 0.84	0.82	8.0	15	9	3	18	N. A. Goble.
Claysville.....	Washington.....	1,127	9	43.6	.....	71	21	13	12	44	3.63	.....	1.80	18.0	10	13	5	12	E. T. Buchanan.
Confidence.....	Somerset.....	1,352	29	.....	.....	.....	.....	.....	.....	.....	4.38	+ 1.21	1.29	.....	13	8	8	14	Grant Pyle.
Franklin.....	Venango.....	955	38	42.0	+ 2.5	72	21	22	15†	43	3.42	+ 0.21	0.92	2.0	18	8	2	20	F. E. Dixon.
Freeport.....	Armstrong.....	772	40	.....	.....	.....	.....	.....	.....	.....	2.96	- 0.17	0.72	7.5	14	3	4	23	Mrs. Anna R. Burtner.
Greensboro.....	Greene.....	768	24	.....	.....	.....	.....	.....	.....	.....	4.86	+ 2.01	1.40	16.5	12	10	4	16	James G. Cramer.
Greensburg.....	Westmoreland.....	1,100	6	43.8	.....	74	21	16	12	41	3.30	.....	1.22	11.0	15	9	7	14	Westmoreland Water Co.
Greenville.....	Mercer.....	950	17	42.2	+ 3.8	72	22	16	12	45	3.69	+ 0.88	1.30	14.2	17	16	4	10	A. M. Orr.
Indiana.....	Indiana.....	1,350	16	42.6	+ 1.7	79	21	16	12	38	2.92	+ 0.14	1.55	6.5	10	7	7	16	R. W. Wehrle.
Johnstown.....	Cambria.....	1,184	25	44.0	+ 2.4	73	19	23	12†	46	3.86	+ 0.66	1.68	4.1	16	7	8	15	E. C. Lorens.
Lock No. 4.....	Washington.....	713	27	.....	.....	.....	.....	.....	.....	.....	2.98	+ 0.45	0.91	6.5	14	6	3	21	R. T. McGowan.
Lycippus.....	Westmoreland.....	1,420	21	43.3	+ 1.5	72	21	19	11†	28	4.42	+ 2.01	1.83	18.0	12	.....	.....	.....	Murray Forbes.
Mosgrove.....	Armstrong.....	775	2	.....	.....	.....	.....	.....	.....	.....	2.65	.....	0.87	2.0	16	8	0	22	C. J. Moore.
Pittsburgh.....	Allegany.....	842	43	45.1	+ 2.2	72	21	21	10	34	2.66	+ 0.11	1.62	14.7	11	6	6	18	U. S. Weather Bureau.
Punxsutawney.....	Jefferson.....	.....	0	42.0*	.....	76	21	20†	12†	53*	3.44	.....	1.60	3.0	8	6	7	17	Samuel M. Rosenthal.
Ridgway.....	Elk.....	.....	0	43.7	.....	73	21	20	6	48	4.15	.....	.....	.....	13	12	0	18	F. J. Eagen.
Saegertown.....	Crawford.....	1,116	22	42.4	+ 4.1	71	21	18	12	44	3.59	+ 0.04	0.70	12.0	13	4	7	19	J. G. Apple.
Sharon.....	Mercer.....	940	2	43.1	.....	71	21	19	12	40	2.75	.....	1.03	8.5	15	1	2	27	Norman S. Powell.
Skidmore.....	Lawrence.....	1,000	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Stoner.
Somerset.....	Somerset.....	2,250	57	40.8	+ 2.2	72	21	10	11	46	4.14	+ 0.70	1.15	12.0	11	4	12	14	W. M. Schrock.
Uniontown.....	Fayette.....	999	25	40.6	+ 3.4	78	21	17	12	45	6.34	+ 2.02	1.80	17.0	11	12	2	16	Wm. Hunt.
Warren.....	Warren.....	1,137	24	41.9	+ 3.1	73	20	20	6	45	3.79	+ 0.31	1.00	4.4	12	10	0	20	Anna Simpson.
Maryland.																			
Deer Park.....	Garrett.....	2,457	20	39.4	+ 1.4	70	21	10	12	43	3.94	+ 1.46	1.01	14.0	9	.....	.....	.....	S. P. Specht.
Grantsville.....	do.....	2,351	20	41.2	+ 1.6	72	21	17	11†	48	4.38	+ 1.82	1.67	13.0	11	10	5	15	J. S. Miller.
Oakland.....	do.....	2,461	14	40.4	+ 3.4	72	21	12	12	54	4.21	+ 1.94	0.95	15.0	15	11	6	14	R. E. Weber.
West Virginia.																			
Bancroft.....	Putnam.....	574	10	44.9	- 0.2	77	6	17	12	48	4.07	+ 1.77	1.30	7.0	11	10	1	19	R. E. Dent.
Beckley.....	Raleigh.....	2,440	14	44.8	+ 2.4	78	13	5	11	48	4.70	+ 2.30	1.30	32.0	7	17	2	11	John A. Ewart.
Bens Run.....	Pleasants.....	622	12	44.4	+ 1.6	72	7†	9	12	40	4.16	+ 1.72	0.80	19.0	12	16	4	10	J. D. Riggs.
Bluefield.....	Mercer.....	2,558	19	43.9*	+ 4.8	75	23*	18	12*	40	0.61	- 2.00	0.20	3.5	6	17*	3*	9*	Norfolk & Western Ry.
Buckhannon.....	Upshur.....	1,411	23	43.4	+ 2.3	70	7†	4	12	55	7.35	+ 4.00	2.00	29.0	11	13	1	16	H. A. Darnall.
Cairo.....	Richie.....	674	11	45.1	+ 1.7	73	20†	5	12	44	4.81	+ 2.85	1.60	14.0	12	2	14	14	Van A. Zevely.
Central Station.....	Doddridge.....	950	11	.....	.....	.....	.....	.....	.....	.....	4.61	+ 2.16	.....	18.0	.....	.....	.....	.....	G. W. Sherwood.
Charleston.....	Kanawha.....	597	28	51.0	+ 3.0	75	20†	23	11	37	5.18	+ 2.05	1.10	9.0	12	15	2	13	R. C. Hewes.
Creston.....	Wirt.....	701	12	47.6	+ 4.8	82	19	10	12	48	4.94	+ 2.72	1.50	9.0	11	12	3	15	J. M. Reed.
Cuba.....	Jackson.....	650	13	45.2	+ 2.1	75	22	10	12	45	5.23	+ 3.24	1.14	12.0	10	8	13	9	C. T. Perry.
Doane.....	Wayne.....	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L. A. Smith.
Elkhorn.....	McDowell.....	1,933	21	49.0	+ 3.4	71	19†	20	11†	35	2.99	+ 0.32	1.42	10.0	5	12	10	8	J. J. Lincoln.
Elkins.....	Randolph.....	1,940	14	43.0	+ 3.4	73	22	6	12	48	5.47	+ 2.61	1.85	20.5	14	10	5	15	U. S. Weather Bureau.
Fairmont.....	Marion.....	883	21	42.6	.....	76	7	10	12	50	5.38	+ 2.68	1.86	17.5	14	16	2	12	F. P. Hall.
Glenville.....	Gilmer.....	738	24	45.2	+ 1.9	78	7	7	12	50	5.60	+ 1.97	2.12	16.0	6	13	1	16	Joe N. Craddock.
Grafton.....	Taylor.....	1,000	21	44.8	+ 2.0	76	6	9	12	52	6.26	+ 3.35	2.50	13.7	11	15	2	13	Joseph Gerken.
Green Sulphur Springs.....	Summers.....	1,600	18	44.2	+ 1.7	74	22	12	12	44	2.97	+ 0.88	1.10	5.0	8	10	8	12	Arthur George.
Hinton.....	do.....	1,450	24	44.6	+ 0.1	73	19†	18	12	50	2.99	+ 0.37	1.22	3.0	8	14	2	14	J. B. Lavender, C. E.
Holcomb.....	Nicholas.....	.....	1	40.9*	.....	73*	21	10	12	43*	5.42	.....	.....	24.0	9	14	1	15	R. E. Ferguson.
Huntington.....	Cabell.....	538	18	46.4	+ 8.0	74	22	20	11	40	4.26	+ 1.56	1.28	4.0	10	11	2	17	L. H. Hutchinson.
Lewisburg.....	Greenbrier.....	2,200	13	43.5	+ 2.3	71	21	10	12	43	3.29	+ 0.78	1.26	5.0	6	18	2	10	Geo. T. Argabrite.
Logan.....	Logan.....	687	11	50.7	+ 3.4	73	7	26	2†	35	3.12	+ 0.37	0.72	4.0	11	15	3	12	Dr. J. E. McDonald.
Lost Creek.....	Harrison.....	1,026	17	42.1	+ 1.6	74	7	1	12	51	5.15	+ 2.80	1.75	14.5	8	12	3	15	Allen Smith.
Madison.....	Boone.....	704	8	42.6*	.....	76*	7†	10†	11	57*	4.89	.....	0.86	10.0	12	9†	5†	10†	S. E. Bradley.
Mannington.....	Marion.....	974	11	43.2	+ 2.8	73	19†	1	12	49	5.28	+ 3.14	1.57	22.2	15	14	3	13	Jas. A. Morgan.
Marlinton.....	Pocahontas.....	2,131	17	38.6	+ 0.3	64	19†	8	12	44	3.05	+ 0.26	0.75	3.0	7	16	6	8	C. J. McCarty.
Morgantown.....	Monongalia.....	1,250	39	45.8	+ 2.6	79	19	21	11†	38	2.81	- 0.43	0.97	.....	11	7	11	12	Prof. Edgar L. Andrews.
Moundsville.....	Marshall.....	642	11	44.8	+ 2.0	73	19†	11	12	47	3.55	+ 2.41	0.92	15.9	13	11	5	14	M. L. Brown.
New Cumberland.....	Hancock.....	987	14	43.8	+ 2.8	72	21	16	12	41	2.72	+ 1.02	1.20	14.0	11	7	6	17	Frank S. Evans.
New Martinsville.....	Wetzel.....	634	20	46.4	+ 2.1	74	7	10	12	42	4.51	+ 1.95	1.60	18.0	11	16	5	9	Wm. Ankrom.
Nuttallburg.....	Fayette.....	2,252	21	40.6	.....	65	19	15	11†	32	4.51	+ 2.04	.....	23.0	7	11†	5†	9†	Miss Donna Tully.
Parkersburg.....	Wood.....	638	25	46.5	+ 3.3	74	22	16	12	38	4.62	+ 1.79	1.65	15.9	11	10	5	15	U. S. Weather Bureau.
Parsons.....	Tucker.....	1,656	14	41.5	+ 0.3	74	21†	4											

TABLE 1.—Climatological data for November, 1913. District No. 3—Continued.

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				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
Ohio.																			
Amesville.	Athens.	630	9	43.5	.....	75	22	5	12	50	4.10	.....	0.92	11.0	9	10	8	12	F. W. Gibson.
Ashland.	Ashland.	1,079	13	43.8	+ 4.6	73	22	14	12	43	2.56	- 0.78	1.00	18.0	6	6	2	22	S. W. Brandt.
Bangorville.	Richland.	1,380	26	43.2	+ 3.8	71	22	13	12	34	2.73	- 0.32	0.80	14.0	12	8	7	15	S. M. Painter.
Bellefontaine.	Logan.	1,276	34	43.5	+ 2.8	72	22	18	11	32	3.75	+ 0.78	1.11	8.0	12	11	2	17	Cory L. Lane.
Beverly.	Washington.	637	20	42.4	+ 3.8	73	21	3	12	46	3.53	+ 1.39	0.87	12.0	14	8	0	23	Mrs. Ella M. Wilson.
Bladensburg.	Knox.	1,100	20	41.6	.....	66	20	12	12	30	2.65	.....	1.80	20.0	5	3	7	20	Miss Mary Elliott.
Brilliant.	Jefferson.	700	9	42.6	.....	70	21	12	12	34	5.21	.....	2.00	20.0	9	9	6	15	Mrs. Mary K. Pennell.
Cadiz.	Harrison.	1,245	21	43.4	+ 2.7	71	20	2	12	46	4.87	+ 2.70	1.80	24.0	10	5	13	12	Harry B. McConnell.
Cambridge.	Guernsey.	803	21	47.6	+ 4.7	75	22	18	11	39	4.09	+ 1.45	0.71	1.0	13	10	8	12	Samuel Mehaffey.
Camp Dennison.	Hamilton.	570	20	42.8	+ 2.7	71	22	18	12	39	2.90	+ 0.43	1.00	12.0	14	14	4	12	Henry F. Pinkvoss.
Canal Dover.	Tuscarawas.	884	20	44.0	+ 4.8	76	22	18	12	36	.....	.....	.....	.....	.....	.....	.....	.....	Francis L. Bixler.
Canton.	Stark.	1,089	30	42.8	+ 2.7	71	22	18	12	39	2.90	+ 0.43	1.00	12.0	14	14	4	12	Carl H. Meyer.
Cardington.	Morrow.	1,010	18	44.0	+ 4.8	76	22	18	12	36	.....	.....	.....	.....	.....	.....	.....	.....	J. W. Shaw.
Chillicothe.	Ross.	630	10	40.6	+ 5.0	76	22	22	11	36	4.26	+ 1.05	1.33	0.8	14	9	3	18	Marion Mackay.
Cincinnati.	Hamilton.	628	42	46.2	+ 3.8	77	22	19	12	45	4.69	+ 2.20	1.30	5.0	13	14	4	12	U. S. Weather Bureau.
Circleville.	Pickaway.	694	25	44.2	+ 2.3	72	7	11	12	43	4.27	+ 2.47	1.25	2.6	13	13	4	13	Dr. H. R. Clarke.
Clarington.	Monroe.	600	10	42.4	.....	70	21	16	12	39	2.62	.....	1.06	20.5	7	12	5	13	Col. S. Tschappat.
Columbiana.	Columbiana.	1,114	42	45.8	+ 4.4	73	22	20	12	33	4.56	+ 1.45	1.16	7.5	15	8	4	18	C. E. Wolfgang.
Columbus.	Franklin.	918	35	45.8	+ 4.4	73	22	20	12	33	4.56	+ 1.45	1.16	7.5	15	8	4	18	U. S. Weather Bureau.
Coshocton.	Coshocton.	770	4	46.8	+ 4.5	72	22	20	11	32	3.98	+ 1.09	1.02	3.2	13	10	4	16	Mrs. Ada Jeffries.
Dayton (1).	Montgomery.	899	2	46.8	+ 4.2	74	20	19	12	39	4.60	+ 1.75	1.03	3.0	12	10	1	19	U. S. Weather Bureau.
Dayton (2).	do.	790	32	46.3	+ 3.6	74	20	19	12	39	4.60	+ 1.75	1.03	3.0	12	10	1	19	Mrs. Edith E. L. Boyer.
Delaware.	Delaware.	896	16	44.0	+ 3.6	74	22	15	12	43	2.06	- 0.35	0.53	5.0	13	11	7	12	De Witt H. Leas.
Demos.	Belmont.	1,325	25	43.9 ^a	+ 2.6	75	22	17	12	39 ^a	3.45	+ 1.02	1.30	16.0	13	12	5	13	J. T. Dyar.
Dennison.	Tuscarawas.	846	3	43.3	.....	71	22	7	12	45	3.10	.....	0.97	15.0	11	11	7	12	Water Supply Co.
Frankfort.	Ross.	745	21	48.2	+ 5.5	77	22	19	11	47	4.39	+ 2.01	0.76	8.0	11	11	2	17	O. A. Cory.
Gallipolis.	Gallia.	580	1	44.1	+ 4.0	75	22	12	12	42	2.93	+ 0.24	0.62	5.5	12	9	2	19	Samuel F. Neal.
Garrattsville.	Portage.	1,005	29	44.1	+ 4.0	75	22	12	12	42	2.93	+ 0.24	0.62	5.5	12	9	2	19	S. M. Luther.
Granville.	Licking.	960	31	44.1	+ 4.0	75	22	12	12	42	2.93	+ 0.24	0.62	5.5	12	9	2	19	Dr. L. E. Davis.
Green.	Adams.	500	20	40.8	+ 4.6	76	22	12	11	41	3.86	+ 1.07	1.40	3.0	8	13	6	11	W. F. Kenyon.
Green Hill.	Columbiana.	1,135	20	40.4	+ 1.8	68	22	11	12	41	1.94	+ 0.21	0.72	10.5	11	8	9	13	Jos. E. Bentley.
Greenville.	Darke.	1,060	27	46.4	+ 5.9	73	22	21	10	35	3.54	+ 0.31	0.70	4.0	14	9	7	14	Geo. A. Katzenberger.
Hamilton.	Butler.	601	1	47.2	.....	73	20	18	11	44	2.69	.....	0.97	.....	10	11	7	12	Earl W. Stout.
Haydenville.	Hooking.	700	1	41.8 ^a	.....	74 ^a	19	9	12	51	.....	.....	.....	.....	.....	.....	.....	.....	H. W. Stiers.
Hillsboro.	Highland.	1,063	34	47.4	+ 3.3	76	20	19	11	44	3.52	+ 0.86	1.17	3.6	12	11	7	12	Carey H. Roush.
Ironton.	Lawrence.	575	30	43.8	+ 3.6	74	22	18	12	38	.....	.....	.....	.....	.....	.....	.....	.....	James Bull.
Kenton.	Hardin.	1,015	21	43.8	+ 3.6	74	22	18	12	38	.....	.....	.....	.....	.....	.....	.....	.....	Frank B. Rarey.
Killbuck.	Holmes.	1,087	20	43.0	+ 2.7	72	22	11	12	42	4.88	+ 2.41	1.40	21.2	13	18	4	8	John A. Schonauer.
Kings Mills.	Warren.	640	1	45.0	+ 2.6	73	22	16	12	37	4.08	+ 1.50	0.94	2.0	12	14	1	15	Frank M. See.
Lancaster.	Fairfield.	898	18	43.8	+ 1.8	72	20	9	12	43	4.67	+ 1.83	1.12	13.2	13	7	8	15	R. L. Renshaw.
McConnelsville.	Morgan.	710	29	45.7	+ 3.0	74	22	13	12	35	4.19	+ 1.20	1.09	12.0	11	9	5	16	C. H. Morris.
Marletta.	Washington.	627	93	45.4	+ 4.8	74	22	19	12	39	2.74	+ 0.15	0.81	13.0	10	7	6	17	Prof. T. D. Biscoe.
Marion.	Marion.	980	35	43.4	+ 4.4	71	22	18	2	39	3.57	+ 1.30	1.06	8.0	8	9	7	14	Dr. E. H. Raffensperger.
Millford.	Knox.	1,200	21	43.9	+ 2.9	74	22	4	12	51	4.07	+ 1.83	1.55	12.0	8	7	13	10	L. H. Burgess.
Milligan.	Perry.	875	20	40.8	+ 1.5	69	21	7	12	46	3.34	+ 0.98	1.90	15.0	8	6	10	14	V. C. Eveland.
Millport.	Columbiana.	1,145	20	40.4	+ 0.8	72	22	2	12	44	3.30	+ 0.87	1.30	25.0	10	12	6	12	G. F. Copeland.
Nelle.	Coshocton.	850	13	40.4	+ 4.3	73	22	19	12	40	4.60	+ 2.03	1.11	8.5	14	10	2	18	Ethel L. Gammertfelder.
O. S. University.	Franklin.	757	30	45.0	+ 3.5	73	22	10	12	37	4.42	+ 1.64	1.12	6.7	15	8	11	11	Prof. H. C. Lord.
Oregonia.	Warren.	690	21	44.0	+ 3.5	73	22	10	12	37	4.42	+ 1.64	1.12	6.7	15	8	11	11	E. H. Stephens.
Pataaskala.	Licking.	1,015	21	46.1	+ 2.2	76	22	13	11	48	5.03	.....	1.25	2.0	14	14	4	12	J. N. Ridsenour.
Peebles.	Adams.	645	2	46.1	+ 2.2	76	22	13	11	48	5.03	.....	1.25	2.0	14	14	4	12	Ora O. Smalley.
Philo.	Muskingum.	1,018	18	45.2	+ 2.2	71	22	17	12	34	4.46	+ 2.26	1.36	13.7	11	8	9	13	L. C. Burekholter.
Piqua.	Miami.	847	3	44.4	+ 3.4	72	20	19	11	39	3.77	+ 1.10	1.35	5.0	8	9	8	13	Harry L. Roberts.
Plattsburg.	Clark.	1,130	20	44.4	+ 3.4	72	20	19	11	39	3.77	+ 1.10	1.35	5.0	8	9	8	13	F. E. Stewart.
Portsmouth.	Scioto.	527	82	48.5	+ 3.8	78	22	18	11	43	4.61	+ 1.65	1.64	2.0	9	8	3	19	Dr. H. A. Schirrmann.
Prospect.	Marion.	909	3	45.6	+ 5.1	73	22	21	3	39	3.06	- 0.19	0.72	5.6	13	8	5	17	Nell J. Gast.
Sidney.	Shelby.	985	30	44.9	+ 2.6	71	22	12	9	34	4.52	+ 2.23	1.00	10.0	11	11	7	12	Hamiline B. Blake.
Somerset.	Perry.	1,080	14	44.9	+ 2.6	71	22	12	9	34	4.52	+ 2.23	1.00	10.0	11	11	7	12	Miss M. W. C. Sheridan.
Springfield.	Clark.	980	19	43.6	.....	71	19	9	12	45	4.42	+ 1.42	0.92	.....	13	9	10	11	W. A. Webster.
Summerfield.	Noble.	1,187	7	43.6	.....	71	19	9	12	45	4.42	+ 1.42	0.92	.....	13	9	10	11	H. R. McClintock.
Syracuse.	Meigs.	583	2	45.8	.....	77	22	15	12	42	5.12	.....	1.20	12.0	10	13	3	14	Irving R. Karr.
Thurman.	Gallia.	696	20	47.6	+ 3.0	78	22	15	11	33	4.41	+ 2.05	1.35	4.0	7	10	6	14	D. D. Thomas.
Toboso.	Licking.	789	.....	41.9	.....	74 ^a	23	12	12	46	3.82	.....	1.10	6.0	6	4	12	14	H. A. Albryn.
Urbana.	Champaign.	1,031																	

TABLE 1.—Climatological data for November, 1913. District No. 3—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky.				Observers.		
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelting.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.		Number of cloudy days.	Prevailing wind direction.
Indiana—Continued.																				
Logansport.	Cass.	620	33	45.8	+ 5.4	73	21†	15	11	40	2.81	- 0.34.	0.55	3.5	13	11	0	19	e.	Chas. Massena.
Madison.	Jefferson.	460	21	49.4	+ 5.3	75	22	17	11	40	4.66	+ 1.47	1.12	2.0	14	9	6	15	sw.	Miss F. Cooperider.
Marengo.	Crawford.	363	31	52.9	+ 8.0	77	23	21	11	37	5.42	+ 0.72	2.40	T.	7	4	10	16	w.	J. M. Johnson.
Marion.	Grant.	814	27	45.8	+ 5.6	71	21	17	11	34	2.59	- 0.54	0.53	1.0	13	9	5	16	sw.	James F. Hood.
Mauzy.	Rush.	980	33	45.6	+ 5.8	74	22	13	11	41	4.49	+ 0.98	1.05	1.5	11	8	5	17	sw.	Elwood Kirkwood.
Monticello.	White.	674	3								2.99		0.44	0.5	10	9	5	16	sw.	J. E. Loughry.
Moore Hill.	Dearborn.	980	12	48.1	+ 4.7	73	22	16	11	38	4.40	+ 2.14	0.90	2.5	13	13	1	16	sw.	W. S. Bigney.
Mount Vernon.	Posey.	410	27	49.2	+ 3.6	80	23	11	11	45	4.23	+ 0.29	1.20	T.	10	14	1	15	s.	Guy B. Green.
Nashville.	Brown.			47.4		76	23	12	11	38	4.29		1.12	1.0	12	7	8	15	sw.	W. C. Goble.
Paoli.	Orange.	611	16	49.4	+ 4.9	78	21	13	11	42	5.47	+ 2.43	1.88	T.	11	10	7	13	sw.	James A. Gillum.
Princeton.	Gibson.	481	31	51.8	+ 7.9	77	22	19	12	36	4.60	+ 1.09	0.89	0.0	12	13	2	15	sw.	Albert Mills.
Richmond.	Wayne.	972	28	45.8	+ 5.0	74	22	14	11	39	4.13	+ 1.04	0.85	1.9	14	7	6	17	sw.	Walter Vossler.
Rochester.	Fulton.	775	8																sw.	Dean L. Barnhart.
Rockville.	Parke.	722	27	48.4	+ 6.4	74	20	15	11	35	5.10	+ 1.66	1.25	T.	13	7	6	17	s.	C. A. Lee.
Rome.	Perry.	370	10	51.6	+ 4.6	79	20	18	11	43	5.64	+ 2.08	1.44	T.	13	12	5	13	sw.	Adam Ansbach.
Salamonia.	Jay.	950	8	45.1		71	20†	18	1	37	3.23		0.57	6.0	16	5	8	17	sw.	S. A. Armstrong.
Salem.	Washington.	717	20	49.6	+ 5.0	77	22	16	10	47	5.02	+ 1.68	1.75	T.	10	5	13	12	sw.	Emmet S. Allen.
Scottsburg.	Scott.	570	19	48.8	+ 3.9	77	22	17	11	41	4.58	+ 1.53	1.04	T.	10	9	8	13	s.	Frank H. Park.
Seymour.	Jackson.	610	26	49.7	+ 6.2	78	20†	15	11	43	4.07	+ 0.59	1.15	T.	12	8	9	13	sw.	J. Thomas Hays.
Shelbyville.	Shelby.	768	9	47.3		75	23	18	11	38	4.74		0.76	2.0	13	6	13	11	sw.	Edgar G. Hadson.
Shoals.	Martin.	523	6	47.2		75	22	15	11†	36	3.79		1.12	1.5	10	11	0	19	se.	Inez M. Rowe.
Terre Haute.	Vigo.	498	23	49.0	+ 4.6	74	20	12	11	32	6.51	+ 3.30	1.65	T.	13	4	8	18	s.	U. S. Weather Bureau.
Veederburg.	Mountain.	612	14	47.6	+ 5.4	72	20†	13	11	37	3.17	+ 1.02	1.02	T.	12	11	6	13	s.	L. A. Culver, Jr.
Vevay.	Switzerland.	525	32	50.0	+ 4.9	75	20†	18	11	40	4.50	+ 1.14	1.25	2.0	9	9	9	12	sw.	Miss Frederica Boerner.
Vincennes.	Knox.	431	21																sw.	Garrett V. List.
Washington.	Daviess.	484	17	49.8	+ 4.0	75	22	18	11	34	5.73	+ 2.59	1.46	T.	11	7	4	19	nw.	Charles C. Feagans.
Whitestown.	Boone.	529	5	44.0		70	20†	16	11	30	3.54		0.93	1.4	15	7	14	9	s.	Clyde O. Laughner.
Winona Lake.	Kosciusko.	865	6	45.7†		71†	21	18	11	35†	2.35		0.49	0.8	13	7	9	14	sw.	Rev. Albert A. Young.
Worthington.	Greene.	526	31	49.4	+ 6.4	75	22	16	11	37	4.16	+ 0.43	1.03	T.	9	6	11	13	sw.	D. W. Soliday.
Illinois.																				
Albion.	Edwards.	531	22	51.0	+ 7.0	75	20	20	11	37	5.00	+ 1.55	1.14	T.	11	14	5	11	sw.	B. F. Michels.
Casey.	Clark.	645	10								6.32	+ 2.65	1.40	T.	10	11	7	12	se.	William Chenoweth.
Charleston.	Coles.	720	28	47.0	+ 4.7	75	20	15	11	34	3.89	+ 0.67	1.57	T.	8	13	4	13	se.	State Normal University.
Danville.	Vermilion.	604	12	48.2	+ 7.6	72	21	15	11	38	4.86	+ 1.61	0.96	T.	12	10	3	17	sw.	J. J. Lemon.
Equality.	Gallatin.	415	15	53.4	+ 5.4	79	20†	22	11	40	3.93	+ 0.80	0.70	T.	8	13	7	10	s.	Dr. L. W. Gordon.
Fairfield.	Wayne.	450	20	51.4†	+ 6.0	78†	22	17†	11	39†	4.40	+ 1.20	1.25	T.	10	15	2	13	sw.	George A. Tromly.
Flora.	Clay.	495	27	50.8	+ 7.9	76	22	30	11	39	4.67	+ 1.33	1.56	T.	11	9	8	13	sw.	W. L. Hanna.
Golconda.	Pope.	500	35	53.5	+ 6.7	80	22	18	10	42	4.77	+ 0.63	1.36	T.	0	9	10	7	sw.	Dr. D. Lawrence.
Hoopeston.	Vermilion.	715	11	47.2	+ 5.7	72	21†	14	11	34	3.31	+ 0.62	0.68	T.	13	12	5	13	sw.	S. F. Hoskinson.
McLeansboro.	Hamilton.	462	30	51.4	+ 6.4	78	20	19	11	43	2.80	- 0.61	0.60	T.	9				sw.	Thos. W. Biggerstaff.
Metropolis.	Massac.	346	2								3.64		0.83	0	10	11	8	11	s.	Henry H. Humma.
Montrose.	Effingham.	599	3	48.5		77	22	15	11	39	6.38		1.97	T.	10	6	12	12	sw.	J. C. Spidler.
Mount Carmel.	Wabash.	424	12	49.1	+ 5.1	77	22	21	11	46	4.00	+ 0.91	1.19	0.3	12				sw.	Mrs. H. M. Phillips.
New Burnside.	Johnson.	613	18	51.8	+ 4.5	78	22	16	11	41	4.19	+ 0.90	1.00	0	11	14	3	13	sw.	Thomas H. McCabe.
Newton.	Jasper.	484	2								5.93		1.67	T.	10	13	8	9	sw.	J. M. Hicks.
Olney.	Richland.	486	26	47.8	+ 3.7	75	22	16	11	49	4.89	+ 1.42	1.90	T.	8	11	10	9	sw.	John T. Ratcliffe.
Piasmine.	Crawford.	500	31	49.2	+ 6.2	76	22	18†	11	37†	5.35	+ 1.61	1.53	T.	11	9	6	15	s.	Duane Shaw.
Paris.	Edgar.	600	20	47.4	+ 5.2	75	20	16	11	44	4.03	+ 0.84	1.37	T.	9				sw.	H. P. Twyman.
Philo.	Champaign.	700	29	46.8	+ 7.1	71	21†	12	11	35	4.08	+ 1.00	1.21	T.	11	9	14	7	sw.	H. A. Burr.
Rileyville.	Saline.	400	16								3.76	+ 1.14	0.81	0	9	8	5	17	s.	W. H. Thornberry.
Shawneetown.	Gallatin.	307	3								4.42		1.48	0	9				sw.	Mrs. Mary O. Spivey.
Sidell.	Vermilion.	680	0								3.84			T.		11	3	16	s.	H. J. Sconce.
Tuscola.	Douglas.	644	20								4.29	+ 1.71	1.23	T.	11	11	7	12	sw.	Joseph O'Neal.
Urbana.	Champaign.	751	11	47.5	+ 6.3	72	21	16	11	34	4.49	+ 2.14	1.06	T.	11	5	10	15	sw.	University of Illinois.
Kentucky.																				
Alpha.	Clinton.		19	55.4	+ 5.9	77	20†	18	11	37	2.08	- 1.65	0.70	3.0	4	18	5	7	w.	W. W. Hicks.
Anchorage.	Jefferson.	700	12	50.4	+ 6.3	79	20	16	11	43	4.53	+ 1.60	0.95	0.5	10	14	2	14	sw.	C. E. Barret.
Bardstown.	Nelson.	637	16	50.8	+ 4.2	77	20	17	11	50	4.76	+ 1.38	1.90	0.2	12	13	4	13	s.	T. S. Talbott.
Beattyville.	Lee.	650	9	47.2	+ 3.5	81	22	13	2†	52	2.54	- 0.43	0.60	0.7	11	10	9	11	w.	G. W. Cann.
Beaver Dam.	Ohio.	441	10	52.4	+ 7.3	78	20	21	1	41	2.34	- 0.78	0.63	0	6	13	7	10	s.	W. T. Austin.
Berea.	Madison.	1,070	12	52.2	+ 5.5	76	20	20	11	43	2.97	+ 0.17	0.75	3.5	10	14	5	11	nw.	C. F. Rumold.
Blandville.	Ballard.	445	32	54.4	+ 7.8	77	22	23	11	35	2.49	+ 1.97	0.67	T.	10	11	6	13	se.	E. W. Horr.
Bowling Green.	Warren.	500	24	50.3	+ 3.4	77	22†	18	10	43	1.32	- 2.74	0.90	0	5	17	4	9	s.	Mrs. L. G. Causey.
Burnside.	Pulaski.	773	22								1.46		0.58	0.7	9				sw.	K. W. Massey.
Calhoun.	McLean.	397	10	54.0	+ 6.6	78	20	20	11	40	4.31	+ 1.11	1.09	T.	13	8	9	13	s.	W. A. Taylor.
Cadetsburg.	Boyd.	544	24								4.28	+ 1.14	1.28	6.0	11				sw.	Mrs. Mertie M. Bruns.
Earlinton.	Hopkins.	370	23	53.4	+ 5.7	78	20†	19	11	47	1.96	- 2.42	0.75	T.	7	14	0	16	s.	Brick Southworth.
Edmonton.	Metcalfe.	600	22	51.6	+ 4.8	75	20	15	11	43	2.29									

TABLE 1.—Climatological data for November, 1913. District No. 3—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.	
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.			
Kentucky—Continued.																					
Richmond	Madison	926	21	51.4	+ 4.6	75	20†	20	11	37	2.90	+ 0.21	0.76	T.	0	10	14	2	14	-----	J. W. Crooke.
St. John	Hardin	777	17	49.0	+ 3.5	75	20	18	11	44	3.44	+ 0.28	0.96	T.	7	7	10	2	18	-----	Bethlehem Academy.
Scott	Kenton	1,087	15	49.1	+ 4.8	75	22	18	11	43	4.29	+ 1.43	0.98	0.5	13	11	10	3	16	s.	E. B. Wilson.
Shelby City	Boyle	1,759	19	48.6	+ 6.0	75	20	11	11	45	2.40	+ 0.74	0.65	1.2	9	13	12	5	12	s.	H. F. Ewing.
Shelbyville	Shelby	759	24	51.0	+ 7.1	76	19†	20	11	42	4.73	+ 0.93	1.82	T.	9	13	5	5	12	sw.	C. R. Burnett.
Taylorville	Spencer	489	11	49.2	+ 4.7	72	20	18	11	39	4.65	+ 1.29	1.82	0.4	13	12	15	3	15	s.	E. D. Bourne.
Weeksbury	Floyd	1,216	0	50.5	-----	75	20†	20	11	40	2.43	-----	0.90	3.5	10	18	3	9	9	s.	O. A. Lund.
Williamsburg	Whitley	939	17	49.1	+ 1.9	75	19	13	17	52	1.23	+ 2.05	0.45	1.5	6	19	2	9	9	e.	Noble C. Jones.
Williamstown	Grant	943	11	47.6	+ 2.8	74	20†	17	11†	48	4.18	+ 1.83	1.53	T.	8	14	5	11	-----	Miss Rose Carter.	
Tennessee.																					
Ashwood	Maury	725	40	54.0	+ 5.0	78	4	19	11	41	0.91	- 2.86	0.41	0	4	10	4	16	s.	Mrs. Joseph W. Fleming.	
Benton	Polk	880	29	50.4	+ 1.2	75	20†	16	11	44	0.75	- 2.27	0.45	T.	5	20	1	6	n.	George L. Williams.	
Bird's Bridge	Greene	728	7	-----	-----	-----	-----	-----	-----	-----	1.61	-----	0.59	T.	5	19	5	6	e.	David B. George.	
Bluff City	Sullivan	1,026	18	52.8	+ 4.8	77	22	16	11	38	1.93	- 0.42	0.68	1.5	4	13	2	15	e.	Walter C. Massengill.	
Byrdstown	Pickett	500	30	53.6	+ 5.2	79	22	18	11	45	1.82	- 1.97	0.96	T.	5	17	0	13	nw.	John Lacy.	
Carthage	Smith	625	15	53.2	-----	77	21	19	11	39	1.79	- 2.80	0.60	T.	6	15	8	7	s.	Earl C. Pickering.	
Cedar Hill	Robertson	484	10	-----	-----	-----	-----	-----	-----	-----	1.43	- 1.75	0.83	T.	4	12	0	18	n.	J. Frank Ruffin.	
Celina	Clay	709	29	52.8	+ 2.5	75	23	22	11	35	2.41	- 2.54	0.37	T.	3	14	2	14	n.	Charles M. Anderson.	
Charleston	Bradley	808	34	52.8	+ 2.5	75	23	22	11	35	2.41	- 1.17	2.04	0.3	5	14	8	8	sw.	John T. Weeks.	
Chattanooga	Hamilton	500	33	54.7	+ 7.3	79	21	19	11	41	1.81	- 2.41	0.56	T.	5	13	7	10	se.	U. S. Weather Bureau.	
Clarksville	Montgomery	800	29	-----	-----	-----	-----	-----	-----	-----	1.43	- 1.80	1.00	2.0	5	16	1	13	sw.	Dr. James A. Lyon.	
Clinton	Anderson	1,885	1	50.8	-----	73	18†	10	11	40	1.43	-----	0.46	2.0	5	13	10	7	-----	H. C. Slover.	
Crossville	Cumberland	850	18	50.0	+ 1.4	76	22	13	11	43	1.22	- 2.08	0.85	T.	5	22	2	6	w.	J. E. Converse.	
Dandridge	Jefferson	850	20	53.6	+ 5.4	77	21	15	11	40	2.05	- 1.97	0.93	0	4	17	4	9	sw.	James E. Swann.	
Decatur	Meigs	800	17	54.7	+ 6.3	80	31	13	11	43	1.99	- 2.56	0.82	0	3	12	5	13	s.	J. Worth Lillard.	
Dickson	Dickson	500	17	54.7	+ 6.3	80	31	13	11	43	1.99	- 2.56	0.82	0	3	12	5	13	s.	Nathan R. Sugg.	
Dover	Stewart	728	4	-----	-----	-----	-----	-----	-----	-----	2.05	- 0.13	0.90	T.	5	21	2	7	e.	Ass. M. Tippit.	
Dunlap	Sequatchie	1,575	22	47.7	+ 3.0	75	19†	17	11	48	1.70	- 1.90	0.74	2.5	5	14	11	5	se.	S. Bradford Boyd.	
Elizabethton	Carter	560	31	53.2	+ 4.6	75	22	19	11	37	1.32	- 2.21	0.67	T.	4	17	4	9	s.	Charles Boyd.	
Erasmus	Cumberland	648	25	51.8	+ 3.9	71	15†	11	34	2.10	- 1.40	1.45	0	3	14	2	14	-----	Mrs. Sara E. Ashley.		
Florence	Rutherford	983	30	54.1	+ 5.8	75	21	17	11	39	1.25	- 2.79	0.65	0	4	17	6	7	s.	Erastus P. Bell.	
Franklin	Lawrence	600	18	52.0	+ 2.3	76	22	16	11	44	0.86	- 2.59	0.57	0	3	17	2	2	s.	Young M. Riser.	
Halls Hill	Rutherford	983	30	54.1	+ 5.8	75	21	17	11	39	1.25	- 2.79	0.65	0	4	17	6	7	s.	Edward F. Wright.	
Hohenwald	Lewis	600	18	52.0	+ 2.3	76	22	16	11	44	0.86	- 2.59	0.57	0	3	17	2	2	s.	Mrs. Mary Lutzelman.	
Iron City	Jefferson	1,630	20	47.2	+ 1.3	76	7	20	12	48	2.25	- 0.78	1.00	0.4	4	22	5	3	sw.	Capt. H. Paul Seavy.	
Johnson City	Washington	364	29	54.1	+ 4.9	78	21	18	11	44	1.60	- 2.76	0.63	0	7	11	5	14	s.	Calvin C. Maddox.	
Johnsonville	Humphreys	977	42	50.2	+ 3.1	72	22	22	11	36	1.11	- 2.49	0.98	0.2	5	14	5	11	ne.	Ward Crosby.	
Kingsport	Roane	522	4	54.3	-----	75	31†	20	11	37	1.79	-----	1.00	T.	4	11	5	14	s.	Miss Sallie B. Mathews.	
Knoxville	Knox	727	19	52.8	+ 3.2	78	22	17	11	42	1.30	- 1.74	0.56	0.4	6	18	3	9	s.	Henry Crumbliss.	
Lebanon	Wilson	872	16	48.6	-----	75	22	16	11	41	1.70	- 2.03	0.75	0.5	5	17	0	13	n.	U. S. Weather Bureau.	
Lewisburg	Marshall	816	22	48.6	-----	75	22	16	11	41	0.96	- 2.07	0.70	T.	2	14	1	15	w.	H. Logan Fields.	
Liberty	Dekalb	770	36	50.4	+ 1.5	73	23	20	11	36	1.34	- 1.99	0.56	T.	4	20	5	5	s.	Dr. Robert D. Crutcher.	
Loudon	Loudon	770	36	50.4	+ 1.5	73	23	20	11	36	1.34	- 1.99	0.56	T.	4	20	5	5	s.	Bratten Evans.	
Lynnville	Giles	1,038	32	52.2	+ 3.8	80	22	14	11	44	1.16	- 2.48	0.61	T.	3	19	0	11	e.	Robert W. Clark.	
McGhee	Monroe	2,486	16	44.6	+ 2.2	73	19	13	11	42	1.04	- 0.73	0.62	1.0	6	24	1	5	-----	Col. James H. Burrow.	
McMinnville	Warren	654	42	53.8	+ 5.1	74	21	23	11	35	1.84	- 2.01	0.92	T.	5	10	8	12	se.	Miss Alice L. Headrick.	
Mountain City	Johnson	1,280	23	-----	-----	-----	-----	-----	-----	-----	1.19	- 1.54	0.45	0.5	4	15	2	13	w.	Horace H. Stiles.	
Nashville	Davidson	1,215	5	-----	-----	-----	-----	-----	-----	-----	1.54	-----	0.63	2.0	6	12	7	11	sw.	Edward E. Barry.	
Newport	Cocke	770	23	53.6	+ 3.2	77	22	17	11	38	1.23	- 1.70	0.57	T.	4	13	8	9	s.	U. S. Weather Bureau.	
New River	Scott	387	7	54.4	-----	80	22	10	11	41	1.47	- 2.83	0.53	0	5	20	6	4	-----	Dr. Chas. T. Burnett.	
Palmetto	Bedford	770	23	53.6	+ 3.2	77	22	17	11	38	1.23	- 1.70	0.57	T.	4	13	8	9	s.	Burl W. Buttram.	
Perryville	Decatur	387	7	54.4	-----	80	22	10	11	41	1.47	- 2.83	0.53	0	5	20	6	4	-----	Mrs. Ross Woods.	
Pinewood	Hickman	1,150	29	48.0	+ 1.3	74	20†	13	11	41	2.48	-----	0.96	T.	4	13	9	8	s.	Oliver C. Kirksey.	
Rogersville	Hawkins	1,410	24	49.0	+ 4.3	75	20†	6	11	45	2.58	- 0.98	0.75	6.0	5	12	8	10	se.	Miss Carrie Cash.	
Rugby	Morgan	442	30	55.2	+ 5.4	76	20†	20	11	44	1.94	- 1.79	0.90	0	5	11	11	8	s.	Fred Beal.	
Savannah	Hardin	749	7	49.0	-----	73	21	16	11	42	1.11	-----	0.63	T.	4	12	8	10	sw.	Samuel G. Wilson.	
Sevierville	Sevier	2,000	19	48.4	+ 0.2	71	26	19	11	28	1.13	- 2.52	0.43	2.0	4	19	6	5	se.	W. H. Carrington.	
Sewanee	Franklin	929	7	51.4	-----	78	21	15	11	44	1.70	-----	0.70	2.0	6	14	9	7	w.	Herbert O. Eckel.	
Sparta	White	377	11	54.0	+ 6.3	77	21	18	11	42	0.98	- 3.80	0.35	T.	6	17	4	9	s.	University of the South.	
Springville	Henry	1,350	16	45.6	-----	75	22	14	11	47	1.31	- 1.86	0.88	1.5	3	15	2	13	sw.	Ernest H. Hull.	
Tazewell	Clayborne	1,075	26	51.0	+ 3.9	74	22	16	11	38	1.42	- 1.99	0.60	0.8	5	17	8	5	s.	Hudnall A. Boden.	
Tullahoma	Coffee	909	9	-----	-----	-----	-----	-----	-----	-----	1.06	-----	0.60	T.	4	22	4	4	sw.	J. Caloway Carr.	
Walling	White	753	28	53.0	+ 4.4	74	22†	18	11	41	2.25	- 1.24	1.26	T.	3	6	20	4	s.	Reuben T. Moore.	
Waynesboro	Wayne	500	17	53.2	+ 3.2	75	15	20	11	38	0.37	- 8.53	0.16	0	3	10	8	12	s.	John K. Roberts.	

TABLE 2.—Daily precipitation for November, 1913. District No. 3—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.					Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.			
North Carolina—Contd.																					
Cullowhee.....	Jackson.....	2,100	3																		Frank H. Brown.
Ellijay.....	Macon.....	2,500																			Chas. G. Mincy.
Highlands.....	do.....	3,850	28	45.2	+ 3.2	69	20	13	11	38	2.11	- 3.58	1.06	1.5	4	16	9	5	ss.		T. G. Harbison.
Hot Springs.....	Madison.....	1,328	15	49.9	+ 0.9	76	23	16	11	42	1.96		0.77	5.0	5	16	10	4	w.		P. A. Garner.
Jefferson.....	Ashe.....	2,900	6	45.8		75	23	15	2	49	2.30		1.53	0.5	6	15	0	15	w.		Prof. E. J. Johnson.
Marshall.....	Madison.....	1,646	11	44.6	- 1.8	68	7†	20	11	44	1.03	- 0.94	0.41	2.0	4				w.		M. L. Church.
Murphy.....	Cherokee.....	1,614	37								1.51	- 2.57	0.74	T.	5						Miss Victoria Mingus.
Rock House.....	Macon.....	2,100	21	48.4	+ 2.0	69	13†	14	11	33	2.12	- 2.34	1.25	0.4	6	20	6	4	nw.		Barry C. Hawkins.
Transon.....	Ashe.....	2,600	1								1.55		0.85	0	3						S. M. Transon.
Waynesville.....	Haywood.....	2,792	19	45.4	+ 1.0	75	19	17	1	46	1.28	- 1.07	0.57	4.5	6	18	2	10	sw.		Mrs. Chas. E. Quinlan.
Virginia.																					
Blacksburg.....	Montgomery.....	2,170	22	44.0	+ 1.8	76	19	18	1	44	2.37	+ 0.22	1.05	0.1	5	13	6	11	w.		Agricultural Experiment Station
Burkes Garden.....	Tazewell.....	3,250	18	42.0	+ 1.7	66	19	10	2	45	2.19	- 0.81	1.14	4.0	3	17	2	11	w		C. H. Greever.
Elk Knob.....	Lee.....	3,243	10	49.8	+ 4.8	68	22	16	11	25	1.57	- 1.51	0.79	3.0	5	17	2	11	s.		Henry Nicoll.
Emory.....	Washington.....	2,094	1	45.0		71	22	16	26	45	1.13		0.65	2.0	4	23	2	5			J. E. Weaver.
Ivanhoe *.....	Wythe.....	2,028	9			66	19	20	1	34	1.49		1.04	0.5	3	19	1	10	w.		Miss Alice G. Jewett.
Max Meadows.....	do.....	2,028	17	42.7	+ 0.7	73	21	14	2	50	1.30	- 0.66	0.68	0.5	4	17	4	9	w.		James M. Graham.
Mendota.....	Washington.....	1,350	4								1.67		0.45	1.0	4						Frank M. Barker.
Mountain Lake.....	Giles.....	4,348	3	44.6		70	22	12	11	32	2.70		1.50	6.0	4	21	1	8			H. E. Dorland.
Radford.....	Montgomery.....	1,773	4								1.46		0.86	T.	2						Arthur Roberts.
Speers Ferry.....	Scott.....	1,221	17								1.50	- 1.76	0.60	3.0	4						Miss L. E. Venable.
Wytheville.....	Wythe.....	2,293	20	45.0	+ 2.0	73	22	20	1	39	1.52	- 1.52	0.87	3.3	5	16	6	9	w.		U. S. Weather Bureau.

* b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.

† Also on other dates.

T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—Daily precipitation for November, 1913. District No. 3, Ohio Valley.

Stations.	Watershed.	Day of month.																														Total		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
New York.																																		
Allegany	Allegany			.03					.17	.83	.02	.10	.40	.39	.13		.02		.13	.05	.10	.02		.10	.11		.03	.06	.07		.07	3.93		
Bolivar	do	T.			.10				.12	.92	T.			.45	.30				T.	T.	T.			.17	.09		T.	.06	T.		.15	2.30		
Olean||	do	.18			.12					.70	.78	T.		.15	.35	.06				.06		.08		.10	.15						.10	2.82		
Pennsylvania.																																		
Alleppo	Ohio								.08	.10					.40	.27	1.00						.10					.12				2.07		
Baldwin	Allegheny							.38	.60	.40	.11	.10	.56	T.	.10				.10					.20			T.	.06	T.	.04	.02	2.60		
Beaver Dam||	Ohio							.14	.45	.39	.01	T.	.03	.42	.03	.10				.01	T.			.03				.06	T.	.12	T.	2.73		
Beaver Falls||	do	.03						.16	.47	1.10	T.		T.	.23	.46	.03	.06		T.					.03				.06	T.	.03	.12	T.	2.75	
Brookville	Allegheny							.31	.42	.31	.40		.56	.30	.24	.41	.22				.04	.04		.08				.06	.08	.03	.12	.06	3.00	
California	Monongahela							.20	.25	.27					.24	.30	.41	.22						T.				.06	.08	.01	.01	T.	3.65	
Chest Haven	do							.11	.48	.22	T.			.04	.31	.48	1.10							.08				.06	.08	.03	.12	.06	4.01	
Clarion||	Allegheny							.20	.25	.27					.24	.30	.41	.22						.08				.06	.08	.03	.12	.06	3.58	
Clayville	Ohio							.18	.50	.20	T.		T.	.30	.40	.18	.56				.02	.08	T.		.02			.11	.15	.06	T.	4.38		
Confidence||	Youghiogheny	T.						.18	1.00	.30	T.		T.	.05	.26	.08	1.29				.02			.05				.11	.15	.06	T.	4.38		
Corasopolis||	Ohio							.08	.60	1.00	.15	T.	.36	T.	.13						.02			.05				.11	.15	.06	T.	4.38		
Davis Island Dam. ||	do	.01						.08	.60	1.20	.02	T.	.05	.45	.04	.14					.02			.01				.11	.15	.06	T.	2.67		
Derry Station	Allegheny							.28	2.07	.06			.31	.07	.49													.18	.13	.25		3.87		
Edinboro	do							.48	1.30	.80	1.00	T.	.95	.10	.03	.08					.07	.10		.03	.13			.01	.11	.13	.01	.06	6.39	
Ellwood City||	Ohio	.02						.18	.26	1.40	.05	T.	.08	.07	.08	.06							.09					.11	.13	.03		8.13		
Franklin||	Allegheny							.28	.71	.92	.03	.06		.28	.38	.06	.06				.04			.02		.07		.05	.19	.02		3.42		
Freeport||	do	T.						.08	1.10	.72	T.		.06	.42	T.	.15	.01											.06	.06	.05	.17	.01	2.96	
Greensburg||	Monongahela							.04	1.00	1.40	.10		.10	.40	.08	1.30	.20							.06				.12	.12	.03		4.86		
Greensburg	Youghiogheny							.27	1.22	.27	T.		.04	.30	.09	.48							.02					.17	.14	.01	.26	.01	3.30	
Greenville	Ohio							.43	1.30	.53	.16	T.	.54	.18	.05	T.					.04	.06	.10	T.		.03	T.	.06	.04	.06	.08	.02	3.69	
Grove City	do							.44	1.37	.42	.05	T.	.57	.24	.05	.04					.08	.05			.14			.01	.07	T.	.07	T.	3.56	
Harris Island Dam||	Allegheny	T.						.01	.62	1.32	.02	T.	.38	.02	.19									.01				.08	.01	.13	.01	2.80		
Indiana	do							.32	1.55	.27	.14		.33	T.	.05	.16												.18	.13	.25		3.33		
Irwin	Monongahela	.65						.14	.46	.05			.09	T.	.39	.45	.01											.15	.10	T.	.20		3.50	
Johnstown	Allegheny							.24	1.68	.28	.01		.04	.18	.11	.49						.03		.04	T.		.06	.08	.18	.18	.06	3.86		
Lock No. 4||	Monongahela							.91	.80	.02	T.		.01	.23	.03	.65	.05											.06	.08	.08	.08	.01	2.98	
Lycippus	Allegheny							.28	1.83	.49			.08	.23	.10	.75							.18					.18	.11	T.	.11		4.42	
Mogrove	do	T.						.02	.65	.87	.02	.03	.15	.53	.02	.04	.02					.01	T.		.08	T.		.02	.01	.19	T.	2.65		
Parkers Landing||	do							.15	.60	.70	.20	.10	.25	.38	.05	.04	.02					.04	.08				.18	.01	.01	.03	.02	.06	.02	3.00
Pittsburgh	Ohio							.10	1.62	.07	T.		.32	.04	.17									.01				.07	.04	.11	.01	2.66		
Punxsutawney	Allegheny							.10	1.60	.30	T.		.68	.27	.12														.01	.16	.13		3.44	
Ridgway	do							.40	.48	* 1.68			.66	.06		.18													.13	.07	.13		4.15	
Seegerstown	do							.51	.60	.70	.55		.69	.10	.05														.01	.13	.01	.10	3.59	
Salisbury||	do	.02						.02	.92	.97	.04	.01	.05	.32	.03	.38	.02							.01				.01	T.	.13	.06	.24	T.	3.28
Sharon||	Ohio	T.						.22	.67	1.03	T.	.01	.27	.28	T.	.02	T.					.08	.01	T.				.02	.01	.03	.07	.01	2.75	
Somerset	Youghiogheny							.25	1.15	.65	.30		.27	.27	.43	.62												.11	.14	.12	.10		4.14	
Springdale||	Allegheny							.02	.70	.85			.04	.45	.03	.18	.01											.03	.08	.03	.20		2.64	
Uniontown	Monongahela							.02	.98	.56		1.80		.45	.44	.95												.10	.04	.08	.08		6.34	
Warren	Allegheny							.10	.40	.27	.27		1.00		.10													.10	.10	.05	.05		3.79	
West Newton ||	Youghiogheny							.01	.60	.65	.15	T.	.08	.23	.08	.60	.04											.02	.15	.06	.09	.02	2.95	
Maryland.																																		
Deer Park	Youghiogheny							.26		.80	.40	.20			.40	.64	1.01								.16				.07				3.94	
Grantville	do								.16	1.67	.60	.10		.10	.28	.75													.28				4.38	
Oakland	do								.60	.95	.40	.08		.06	.15	.65	.54								.25			.12	.15	.10	.01	.05	4.21	
West Virginia.																																		
Bancroft ||	Great Kanawha								.25	.40	.55				.35	.37	1.30	.10											.05	.60	.05	.06	4.07	
Beckley	do								.12	1.20	1.30	.80	.10		.40	.65	.80	.80											.53	.62			4.70	
Bons Run	Ohio							.18	.52	.13	.08			.40	.65	.80	.80												.30	.01	.09		4.16	
Blaine	Great Kanawha							.20	.20	.10	.05					.15													.06				0.61	
Brandenburg||	Monongahela							.68	.68				.60				2.24	.10											.80	.71	.25		5.31	
Buckhannon||	do							.32	2.00	1.00	.10		.25	.80	1.23	1.20													.10	.10	.25		7.35	
Cairo	Little Kanawha							.25	.65	.75			.12	.52	.42	1.60													.14	.12	.08	* 0.2	4.81	
Central Station	Mid. Isl. Creek	*	*	*	*	*	*	*	* 1.55	.66	T.			T.	.45	.74	.98					*	*	*	*	*	*	*	*	*	*	*	* 2.0	5.61
Charleston||	Great Kanawha							.35	1.00	1.10				.25	.30	1.04	.42												.15	.42	.03	.10	5.18	
Cheat Bridge ||	Monongahela							.15	1.15	.30	.05		.45	.50	1.15	.38							T.						.21	.35			4.69	
Cordland ||	do							1.00																										

TABLE 2.—Daily precipitation for November, 1913. District No. 3—Continued.

Stations.	Watershed.	Day of month.																														Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
West Virginia—Con.																																
Sutton ||	Great Kanawha							.19	.51	*	*	*	1.60	.51	.61	1.20	.15												.51	.01		5.26
Union	do.							.80	.05	.12					.55												.07	.37				1.91
Wellsburg	Ohio							.26	.95	1.20					.21			.20	.07					.05			.10	.05	.65	.08		3.12
Western ||	Monongahela				T.			.10	1.20	.80	T.			.06	1.14	.42	2.00	.10		T.				.06				.05	.08	.06		3.17
Wheeling ||	Ohio				.01			.20	.52	1.53	.03	T.		.04	.33	.05	.65	.05		T.				.01	T.		.05	.13	.08	.15	.02	3.71
Williamson ||	Big Sandy							.36	.76	.20					.24	.36	.34							.04			.02	.28				2.60
Ohio.																																
Amesville	Ohio							T.	.55	.50	.40	T.		T.	.92	.62	.85		T.	T.	T.			T.			.10	T.	.10	.06	T.	4.45
Ashland	Muskingum							.63	1.00	.80	T.		.10		.02	T.	T.							T.			T.	.15	.05	.07	.02	2.54
Bangorville	do.			T.				.15	.67	.60	.80	T.			.04	.09			.07	.07				T.			T.	.15	.05	.07	.02	2.54
Bellefontaine	Great Miami							.03	1.04	.10	.70				.07	.08	.02	.08									1.11	.17	.16	.24	3.71	
Bladensburg	Muskingum							.22	.65	.60	.60				.08	.60	.10	.05		.03					.10		.26	.10	.12	.08	T.	3.71
Brilliant	Ohio							T.	.25	1.80		T.	.20														T.	T.	.20			2.65
Cadis	do.			.02				.02	.20	2.00	1.78				.03	.92				T.				T.			.16	T.	.08	T.		5.21
Cambridge	Muskingum							.71	1.80	.60					.03	.61	.23	.37									.29	.18	.07		4.87	
Camp Dennison	Little Miami							.38	.55	.06	.04				.55	.71	.47									.12	.23	.02	.50	.27	.19	4.05
Canton	Muskingum			T.				.30	.40	1.00	.20	T.		.15	.38	.08	.02		.05					.04			.08	.05	.10	.05		2.90
Chillicothe ||	Scioto							.95	.06	.66			T.		.26	T.	.53	.64							.01		.06	.08		.37	.10	3.70
Cincinnati	Ohio							.77	.04	.10	T.			.16	.28	1.24	.29							.06	.03		.21	.02	.53	.21	.32	4.26
Circleville	Scioto				T.			.76	.41	.15	.22			T.	1.30	.63	.41								.06	.08	.26	.03	.13	.16	.17	4.26
Clarington	Ohio							.30	1.25	.40				.50	.50	.32	.75			T.					.05		.10	.05	.02	.01	.02	4.27
Columbiana	do.			.03				.02	1.66	.40				.12	.27	T.	T.										T.	T.	.13			2.62
Columbus	Scioto			T.				.83	.12	.68	.12			.61	.55	.34	.21			T.	T.				.04	.02	.36	.03	.12	.15	.38	4.56
Coshocton	Muskingum				.02			1.10	.25	1.70	.01			.60											.05	.10	.10	.05	.04	.09	.05	4.17
Dayton (1)	Great Miami							.51	.17	.25				.44	.58	.75	.14			T.					.07	.15	.18	.30	.20	.38	3.98	
Dayton (2)	do.							.14	.50	.04	.26			T.	1.03	.61	.34									.15	.21	.45	.30	.51	4.60	
Delaware	Scioto							.53	.03	.43				T.	.37	.10	.02			.02					.02	.02	.30	.03	.03	.17	.02	2.06
Demos	Ohio				.02			.03	.29	1.30	.30			T.	.05	.21	.65			T.						.09	.17	.10	.19	.65	T.	3.10
Dennison	Muskingum							T.	.45	.97	.55				.64	.08	.11			T.					.02	.11	.06	.03	.68			3.10
Frankfort	Scioto							.15	.75	.30	.45			T.	.50	.65	.64									T.	.10	.35	.16	.40		3.30
Gallipolis ||	Ohio							.41	.23	.45				.44	.18	1.35	.09										.15	.26	.06			3.58
Garrettsville	Mahoning			T.	.03			T.	.30	1.31	.66	.04		.36	.18	.02	.04			.10	.03	.06				.01	.04	T.	.12	T.	3.26	
Granville	Muskingum							.62	.45	.40	.15	T.		T.	.61	.17	.05								.08	.16	T.	.07	.10	.07	2.93	
Green	Ohio							T.	.30	T.				.80	.15	.30	1.40										T.	.10	.20	.61	3.86	
Green Hill	Muskingum			T.	T.			.05	.24	.73	.23	T.		.11	.38	T.	.02			T.	T.				T.	T.	.05	.03	.06	.05	T.	1.94
Greenville	Great Miami							.10	.27		.35			.02	.70	.48	.02			.02					.01	.18	.04	.35	.55	.45		3.54
Hamilton	do.							*	.82	.01	.04			.97						.04					.09		.01	.27	.18	.26		2.66
Haydenville	Ohio																															
Hillsboro	Scioto							.01	.52	.31	.05			.15	.25	.22	1.17										.08	.15	.53	T.	.08	3.52
Ironton	Ohio							T.	1.20	1.00	1.40	.20		.20	.10	.15				T.	.18				.05	.08	.10	.12	.10	T.		4.88
Killbuck	Muskingum							.24	.03	.17				.64	.46	.88									.11	.10	.11	.05	.45	.09		4.03
Kings Mills ||	Little Miami							.50	.48	*	.90	T.		T.	.78	.35	.47								.02	.18	.03	.16	T.	.18		4.08
Lancaster	Ohio			T.				.09	.69	1.12	.31	.02	T.	T.	.98	.86				.02					.02	.18	.02	.28	.20	.06		4.67
McConnellsville	Muskingum							.32	1.09	.43				.57	.71	.70										.18	.11	.03	.04	.01		4.19
Marletta	Ohio							.08	.80	*	.81			.50	.12					.08							.10	.05	.05	.15		2.74
Marion	Scioto							.24	1.06	.40	.45	.40			.59	T.										.22	.22	T.	.21	T.		3.57
Millfordton	Muskingum							T.	.38	1.90	.25			.16	.43	T.	T.			T.						.10	.53	.06	.04	.04		4.07
Milligan	do.							.65	.80	.40				.07	.45	T.	.04			T.						.04	.15	T.	.05	.05	T.	3.34
Millport	Muskingum							.41	.69	.45	.40			.11	.11	.24	.37			.03						.31	.04	.11	.13	.27		4.60
Nelle	Scioto							.49	.51	.30	.37	T.		.01	1.12	.21	.35			.01	T.				.04	.33	.03	.22	.12	.11		4.42
O. S. University	Muskingum							.65	.42	.04	.09			.15	.42	1.25	1.00			.01					.10	.24	.07	.31	.09	.20		5.03
Pataaskala	Ohio							.18	.70	1.36	.06	T.		T.	.76	.18	.68									T.	.28	.02	.17	.07	T.	4.46
Philo (1)	Muskingum							.07	.38		.34			.25	.85	.07	.25	T.								.35	.02	.05	.32	T.		3.77
Piqua ||	Great Miami													.13	.35	.43	.28										.58	.24	.32			3.77
Plattsburg	Little Miami							.64			.28			.58	.38	1.64											.13	.86	.08	.02		3.06
Portsmouth ||	Ohio							.10	.57	.08	.48			.05	.72	.17			.01								.34	.04	.17	.11	.22	4.31
Sidney	Great Miami							.13	1.00	.60	.65	T.		T.	.92	.26	.42			T.						.07	.18	T.	.19	.10		4.52
Somerset	Muskingum							.68	.25	.31				.92	.41	.25			T.	T.						.09	.27	.03	.10	.24	.33	4.10
Springfield	Great Miami							.22	.61	.35	.43	.10		.01	.51	.21	.78								.03	.20	.13	.13	.06			4.42
Summerfield	Ohio							.51			1.20			T.	.50	1.03	.86										.20	.13	.33	.11	.03	4.41
Syracuse	do.							T.	.53	.40				T.	.50	1.35	.80										.08	T.	.75	T.		4.41
Thurman	Muskingum							.95	.10	.90				T.	1.10		.55												.22			3.82
Toboso	do.							.21	.42	.14	.31			T.	.43	.18	.30			.02							.31	.05	.16	.22	.27	2.49
Urbana	Great Miami							.40	.32	1.55	.57	.12		.43	.18	.04				.07						.08		.04	.10	.05	.03	3.58
Warren	Mahoning							.51	.42	.15	.15			T.	.22	.75	.75			.04							.11	.03	.25	.15	.20	3.78
Waverly	Scioto							.30	.49	T.	.20			T.	.32	.63	.50										.28	.30	.32	.35		4.76
Waynesville	Little Miami							.08	.63	1.00	.80	T.		.50	.40																	

TABLE 2.—Daily precipitation for November, 1913. District No. 3—Continued.

Stations.	Watershed.	Day of month.																														Total.		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
Indiana—Continued.																																		
Monticello ||	Wabash							T.	.44	.30	T.			.25	.38	.13	.23			T.	.21			T.		.25	T.	T.	.40	.40	2.99			
Moore Hill	Ohio							.14	.65	.15	.10			T.	.65	.90	.55							.10		.28	T.	.02	.26	.25	.35	4.40		
Mount Vernon ||	do.							.60	.06			T.		T.	.08	1.20	1.19							.01		.28	.42	.20	.10	.36	4.22			
Nashville	E. Fork, White							.15		.10				.43	.69	1.12	0.36				.01			.28		.29	T.	.14	.29	.43	4.29			
Paoli	do.							.09	.54	T.	T.				.93	1.88	.69						.16		.18	T.	.17	.39	.30	5.47				
Princeton	Wabash							.11	.54	.49					.89	.86	.02						.22		.34	.19	.18	.29	.48	4.60				
Richmond	Whitewater							.46	.05	.09	T.			.49	.29	.62	.13			T.	T.		.07		.09	.20	.01	.85	.28	.50	4.13			
Rochester	Wabash																																	
Rockville	do.							.31	.30	T.	T.	T.		.13	.37	1.25	.03			T.	.14	T.		.12	.06		T.	.33	T.	.90	.46	7.07		
Rome	Ohio							.03	.84	.01	T.			.75	1.11	.55	1.44							.03	.12		.02	.52	.07	.03	.24	5.64		
Salamonia	Wabash			T.				.07	.53	.15	.42	T.	T.	.15	.54	.25				.05	.04			.03		.11	.08	.02	.10	.57	3.23			
Salem	Ohio							.16	.60						.52	1.75	.92							.14			.10	.10	.22	.45	5.02			
Scottsburg	E. Fork, White							.39	.73	T.	T.			T.	.52	1.04	.98				T.			T.		.21	.09	.15	.08	.39	4.58			
Seymour	do.							.10	.43	T.	T.			.03	.57	1.15	.45		.01	T.				.38		.19	.03	T.	.30	.43	4.07			
Shelbyville	do.							.24	.58	.10	.05			T.	.75	.76	.22			T.				.21		.35	.01	.08	.08	.71	4.74			
Shoals ||	do.							.11	.56	T.		T.		T.	.43	1.12	.82									.18	.06	.20	.23	.08	3.79			
Terre Haute	Wabash							.56	.03	T.	T.	T.		.38	.46	1.02	.02			.02			.95		.05		.23	T.	1.66	.45	.68	6.51		
Veederburg	do.							.03		T.	T.			.06	.52	1.02	.03			.01	.15	.02				.10	.02	.46	.43	3.17				
Vevay	Ohio							.10	.75	.20					.50	1.00	1.25						T.		.15		.25	.03	.17	.24	7.1	5.73		
Washington	W. Fork, White							.31	.17	T.	T.				1.04	1.46	.20			.01	.01	.09	T.	1.15		.25	.03	.17	.24	7.1	5.73			
Whitestown ||	do.							T.	.93	.10	.06				.41	.38	.44			.01	.01	.09	T.	.29		.08	.05	.14	.50	.05	3.54			
Winona Lake	Wabash							.03	.49	.04	.06			.33	.08	.07				T.	.25	.02		T.		.14	.02	.39	.43	2.35				
Worthington	W. Fork, White							.10	.51	T.				T.	.84	1.03	.29									.63		.14	.30	.32	4.16			
Illinois.																																		
Albion	Wabash							.59	.03	T.				T.	1.14	.70	.15						.33				T.	.42	.12	.64	.34	5.00		
Casey	do.							.40	.05	T.				T.	.65	1.40	.15						.85				.42	.14	.62	.74	6.32			
Charleston	do.							.05	.08	T.				T.	.38	1.57	T.						T.			.26	.18	.30	.50	.75	3.89			
Danville	do.			T.				.07	.09	T.	T.			.05	.82	.91	.05				.25	T.		.07			.18	T.	.87	.82	.68	4.86		
Equality	Ohio							.43	T.	T.	T.			.02	.70	.64	.70										.37	.45	T.	.62	3.93			
Fairfield	Wabash							.43	T.	T.	T.			T.	1.25	.50	.21							.23		.54	.07	.17	.43	.57	4.40			
Flora	do.							.38	.03	T.	T.			T.	1.56	.80	.39							.32		.13	.02	.08	.26	.70	4.67			
Galesburg	Ohio							.58	.80					.28	.18		1.36										.71	.18	.30	.38	4.77			
Hoopeston	Wabash							.13	.05	T.	T.			.07	.43	.44	.04				.17	T.		.07		.43	.03	.43	.34	.68	3.31			
McLeansboro	Ohio							.22			.14				.14	.58	.25									.23	.42	.22	.60	2.80				
Metropolis	do.							.60	.04					.34	.18	.83	.43						.08			.38	.21	.18	.55	3.64				
Montrose	Wabash							.14	T.		T.				.02	1.97	.09			T.			.86			.48	.08	.49	.96	6.38				
Mt. Carmel	do.							.02	.63	.04	T.				.28	1.19	.62									.28	.12	.39	.33	.49	4.60			
New Burnside	Ohio							.06	.45		T.			.04	.18	.55	1.00							.31		.03		.60	.62	.48	4.19			
Newton	Wabash							.44	.01	T.	T.			T.	1.21	1.67	.27						.67			.27	.12	.37	.35	.67	5.93			
Olney	do.							.68	T.	T.	T.			T.	.78	1.90	.58							.10		.12	T.	.36	.37	.47	4.89			
Palestine	do.							.39	.19	T.	T.			T.	1.10	1.53	.27							.06		.26	.27	.40	.60	5.35				
Paris	do.			T.				.50	T.	T.				T.	.60	1.37	.08			T.		T.		.06		.30	T.	.35	.40	.25	4.03			
Philo	do.							T.	.03					.05	.34	1.21	.04							.28		.18	.18	.30	.43	1.00	4.08			
Rileyville	Ohio							.35						T.	.73	.35	.52				.17			.17		T.	.27	.81	.23	.33	3.76			
Shawneetown	do.							.94						.01	.04	.81	1.48									.38	.30	.18	.28	4.42				
Sidell	Wabash							T.	.05	T.	T.			.07	.66	1.23	.04				.18			.14		T.	.23	T.	.46	.43	4.80	4.29		
Tuscola	do.							T.	.03	T.	T.			.31	.59	.91	.04				.16	T.	T.	.05			.06	T.	.94	.34	1.06	4.49		
Urbana	do.			T.				T.	.03	T.	T.																							
Kentucky.																																		
Alpha	Cumberland							.65	T.	.30					.77	.95	.87										.18	T.			.43	2.08		
Anchorage	Ohio							.60	.40	.05	T.			.34	.77	.95	.87							.03			.31	.10		.17	4.76			
Bardstown ||	Salt							.05	1.90	.03	.02				.32	.87	.89							.03			.18	.16		.04	2.54			
Beattyville ||	Kentucky							.60	.24	.18	.08				.06	.46	.32	.22									.15	T.		.12	2.34			
Beaver Dam ||	Green							.67	.75	.24	.32				.43	.46	.53										.22	.02	.12	.24	2.97			
Berea	Kentucky							.67	.03	T.	T.			.20	.50	.24	.52							.06			.05	.31	.09	.48	2.49			
Blandville	Mississippi							.05	.90	T.					T.	.13	.47							.03			.05	.02	.32	1.32				
Bowling Green ||	Green							.58	.05	.06	T.			.25	.50	.59	.98	.01						.03		.02	.31	.03	.03	.38	4.31			
Burnside ||	Cumberland							.02	1.09	T.	T.				.42	.32	1.28	.12									.14	.52	.14	.04	4.24			
Calhoun	Green							.48	.36	.46	T.				.24	.07	.48										.15	.06	.21	1.96				
Catlettsburg ||	Big Sandy							.15	.99	.04	T.				T.	.49								.06			.06	.06	.50	2.29				
Earlington ||	Green							.13	.12						.43	.43																		

TABLE 2.—Daily precipitation for November, 1913. District No. 3—Continued.

Stations.	Watershed.	Day of month.																														Total.			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30				
Tennessee—Contd.																																			
Cedar Hill.....	Cumberland.....							.25	.55	T.	T.						.60							T.				.05		.08	.26	1.79			
Collins ||.....	do.....								.83	T.	T.						.40	.06													.14	1.43			
Charleston ||.....	Tennessee.....								.37	T.								.07						T.							.13	0.57			
Chattanooga.....	do.....								.34	.03	T.						.09													.16	.79	2.41			
Clarksville.....	Cumberland.....							.37	.56	T.	T.						.51													.04	.33	1.81			
Clinton ||.....	Tennessee.....							1.00	T.		.10	.10	T.					.21												.02	1.43				
Crossville.....	do.....							T.	.46	.07							.45	T.													.25	1.43			
Dandridge ||.....	do.....								.56	.04	.08						.12	.32														1.12			
Decatur.....	do.....								.85	.03	T.						.08							T.	T.						.08	.18	1.22		
Dickson.....	Cumberland.....								.60								.93													.05	.47	2.05			
Dover.....	do.....							.82	T.	T.							.56													T.	.61	1.99			
Elizabethton ||.....	Tennessee.....								.54	.90	.01						.20	.40														.25	2.05		
Erasmus.....	Cumberland.....								.74	.18	T.				T.		.51							T.	T.						.12	.15	1.70		
Florence.....	do.....							.01	.67	T.							.22							T.	T.							.42	1.33		
Franklin.....	do.....							T.	1.45	T.							.23							T.	T.							.42	2.10		
Hall's Hill ||.....	do.....								.92	T.		.04					.12	.13														.35	1.56		
Hohenwald.....	Tennessee.....							.06	.27	T.							.27															.65	1.25		
Iron City.....	do.....							T.	T.	T.							.27													.02	.57	0.86			
Jefferson City.....	do.....								.45	T.	T.						.47															.10	1.02		
Johnson City ||.....	do.....								.55	1.00	.20							.50														.36	1.60		
Johnsonville ||.....	do.....							.15	.63	.01	T.						.31	.05													.09	.04	1.14		
Kingston ||.....	do.....								.90	T.	T.	T.					T.	.20															.04	1.14	
Knoxville.....	do.....							T.	.50	.01	T.						.16														.03	.41	1.11		
Lebanon.....	Cumberland.....							T.	1.00	T.	T.						.41															.30	1.79		
Lewisburg.....	Tennessee.....							.01	.46	.04	T.						.19															.04	.56	1.30	
Liberty.....	Cumberland.....								.75	.05	T.						.05	.25															.60	1.70	
Loudon ||.....	Tennessee.....								.70	T.								.26															T.	0.96	
Lynnville.....	do.....							T.	.56	T.							.19														.08	.51	1.34		
McGhee ||.....	do.....								.44	.08	T.							.25														T.	0.77		
McMinnville.....	Cumberland.....								.61	.03	T.						.17															.35	1.16		
Mountain City.....	Tennessee.....								.62	.05	.05						.60	.12														.20	1.64		
Nashville.....	Cumberland.....							.89	.06	T.	T.						.25														.02	.63	1.84		
Newport ||.....	Tennessee.....								.45	.32	.02						T.	.40															.13	1.19	
New River ||.....	Cumberland.....								.63	.12	.19						.14	.33															.13	1.64	
Palmetto.....	Tennessee.....							T.	.57	T.							.13															.17	.35	1.22	
Perryville.....	do.....								.07	.37	T.						.38															.12	.53	1.47	
Pinewood.....	do.....								.39	.85	T.						.29																.96	2.48	
Rogersville ||.....	do.....								.45	.06	.01						.44															.02	.02	1.00	
Rugby.....	Cumberland.....								.58	.40	.20						.65																.75	2.58	
Savannah.....	Tennessee.....							.10	.90								.43															.05	.46	1.94	
Sevierville.....	do.....								.63	.02							.38																.08	1.13	
Sewanee.....	do.....								.11	.20	T.						.43																.39	1.13	
Sparta.....	Cumberland.....	.05						T.	.60	.20	T.						.10															.05	.70	1.70	
Springville.....	Tennessee.....								.25	.10	T.				.02		.35															.05	.21	0.98	
Tazewell ||.....	do.....								.88	T.	.15	T.					T.	.28															T.	.44	1.42
Tullahoma.....	do.....								.60	.08	T.						.25																.06	.44	1.42
Walling ||.....	Cumberland.....								.60	.04	T.						.12	T.															.30	1.06	
Waynesboro.....	Tennessee.....							T.	1.26	T.							.50																.49	2.25	
Wildersville.....	do.....								.11								.16																.10	0.37	
Worsham ||.....	Cumberland.....								.30	1.11	T.						.45																.60	2.46	
Yukon.....	Tennessee.....								.06	.40							.35															.05	.58	1.44	
Alabama.																																			
Bridgeport ||.....	Tennessee.....								1.00	.01	.01							.28														.60	1.90		
Decatur.....	do.....								.36									.34															.53	1.23	
Florence.....	do.....								.06	.02	T.						.18															.10	.55	0.81	
Guntersville ||.....	do.....			T.					.22	T.							.40																.75	1.87	
Madison.....	do.....								.73																								.55	1.28	
Riverton.....	do.....								.08	.08							.14	.35															.13	1.68	
Scottsboro ||.....	do.....								.19	T.							.24																.12	1.13	
Tusculum ||.....	do.....								.18								.12																.64	0.94	
Georgia.																																			
Mineral Bluff.....	Tennessee.....								.08								.03										.01				.01		0.13		
North Carolina.																																			
Altapass.....	Tennessee.....				T.					*	1.90						T.															.60	2.50		
Andrews.....	do.....								1.06	.09							.55																.24	1.94	
Ashville.....	do.....								.39	T.	.40		T.				.10															.06	.26	2.00	
Banners Elk.....	do.....								.74								.83																	.43	1.17.

TABLE 3.—Maximum and minimum temperatures at selected stations for November, 1913. District No. 3, Ohio Valley.

Date.	Pennsylvania.				West Virginia.																Ohio.								
	Greenville.		Pittsburgh.		Charleston.		Elkhorn.		Elkins.		Glenville.		Hunting- ton. §§		Morgan- town.		Parkers- burg.		Wheel- ing. §§		Canton.		Cincinnati.		Columbus.		Dayton.		
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	
1.....	47	28	43	28	48	30	47	23	42	21	54	21	42	28	45	23	48	24	48	28	46	24	48	30	45	28	45	26	
2.....	48	25	49	31	60	27	58	23	54	19	60	19	51	25	51	23	53	24	53	23	50	24	56	29	49	28	50	28	
3.....	59	24	59	33	65	28	65	28	64	22	70	22	63	28	61	28	60	29	62	26	57	29	61	36	58	35	58	37	
4.....	52	33	52	37	65	49	60	39	57	31	64	40	59	32	57	44	57	40	63	28	53	33	57	39	56	35	54	26	
5.....	56	23	52	32	61	34	62	29	60	24	64	24	56	31	53	26	55	32	59	28	53	24	57	35	54	31	56	29	
6.....	65	20	67	33	69	36	69	39	69	21	72	22	68	30	68	30	69	32	67	28	66	27	69	37	66	34	64	36	
7.....	67	33	68	48	74	43	70	44	70	29	78	30	71	32	72	44	72	40	70	29	68	46	63	52	65	49	60	51	
8.....	55	46	61	41	72	51	68	41	56	42	65	35	59	42	65	48	59	40	55	35	55	40	53	34	55	34	51	31	
9.....	49	31	41	23	55	28	60	33	42	22	54	26	33	32	51	24	40	27	34	32	40	24	34	28	34	25	31	26	
10.....	35	21	26	21	32	28	55	24	25	20	30	23	31	28	26	24	31	26	29	24	26	21	31	26	27	24	28	22	
11.....	29	21	30	21	35	23	37	20	24	18	33	21	36	20	27	21	33	19	31	25	32	22	37	22	33	22	34	20	
12.....	40	16	48	22	55	24	51	20	53	6	48	7	57	21	49	21	54	16	50	15	45	18	65	29	53	20	60	28	
13.....	46	34	55	46	68	42	66	43	57	37	60	20	63	23	54	47	59	53	54	17	52	43	61	55	61	51	61	54	
14.....	48	35	51	37	60	50	65	50	52	40	53	45	57	51	54	41	56	41	53	46	48	20	61	45	53	39	55	42	
15.....	49	24	41	34	65	47	64	52	52	37	52	43	56	46	46	33	44	38	40	34	36	29	52	42	42	36	44	37	
16.....	43	31	39	36	58	53	64	48	54	36	54	44	50	44	48	37	45	38	43	35	43	29	47	41	43	35	45	37	
17.....	49	28	48	34	53	40	56	40	48	31	53	30	50	42	49	34	51	30	49	30	44	26	51	43	46	30	47	35	
18.....	54	31	55	37	63	38	63	33	55	27	57	30	61	33	55	39	55	35	69	30	50	36	66	44	62	37	63	42	
19.....	64	38	69	54	74	47	71	44	70	48	70	50	71	39	79	55	73	53	73	37	65	49	71	54	68	50	67	52	
20.....	60	56	64	58	75	48	65	42	63	46	68	45	71	45	66	57	71	54	68	51	68	56	72	59	73	56	70	57	
21.....	64	49	72	54	72	48	71	44	73	40	70	37	69	42	71	49	69	47	73	44	69	50	73	62	67	52	68	53	
22.....	72	54	70	57	75	47	62	45	73	37	68	45	74	41	72	50	74	52	70	44	71	54	76	60	73	56	72	58	
23.....	63	41	65	39	75	52	60	35	63	33	68	44	62	48	65	46	66	41	61	53	61	35	63	42	62	37	61	36	
24.....	46	29	45	34	57	35	51	27	46	30	58	25	52	35	46	30	51	35	54	30	48	30	56	39	49	34	52	35	
25.....	48	24	46	32	53	30	60	36	49	23	54	21	50	27	47	32	50	26	48	26	48	25	53	35	47	31	49	30	
26.....	44	37	44	40	55	40	60	46	51	33	68	44	53	27	47	37	47	42	44	27	43	41	52	44	46	41	47	41	
27.....	43	39	48	42	56	52	61	45	51	43	56	35	53	45	48	42	51	44	48	40	45	41	53	49	49	43	54	45	
28.....	42	37	50	44	65	53	60	42	50	43	54	33	52	48	49	44	55	48	49	44	46	41	59	52	51	46	59	47	
29.....	51	39	52	48	65	48	58	43	60	38	52	35	59	47	56	44	66	47	51	47	49	45	60	53	57	51	61	53	
30.....	55	44	53	48	65	53	59	41	56	43	53	37	65	48	56	47	64	50	63	49	59	46	59	55	61	52	59	56	
Mns..	51.4	33.0	52.1	38.1	61.2	40.8	60.6	37.3	54.6	31.3	58.7	31.8	56.8	36.0	54.4	37.3	55.6	37.4	54.0	33.5	51.0	34.6	52.2	42.0	53.5	38.1	54.2	39.3	

Date.	Ohio.				Indiana.												Philo, Ill.		Kentucky.									
	Marion.		Waverly. §§		Butlerville.		Evansville.		Indian- apolis.		Kokomo.		Rockville.		Worthing- ton.		Max.	Min.	Beatty- ville. §§		Bowling Green. §§		Earling- ton. §§		Greens- burg. §§		Lexing- ton.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.			Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	46	22	50	20	50	23	48	30	44	28	43	20	46	19	45	22	42	19	57	22	53	21	56	21	52	20	46	31
2.....	54	23	55	18	59	24	57	33	53	31	54	28	54	26	54	26	53	24	64	13	60	22	63	23	60	22	54	32
3.....	58	32	63	24	62	36	65	47	61	42	59	38	63	40	63	38	59	41	70	26	69	26	65	40	69	31	62	40
4.....	58	34	59	41	59	35	59	42	52	37	56	30	60	33	58	35	52	29	67	28	65	35	66	32	66	34	56	40
5.....	60	23	57	26	67	30	56	37	56	32	57	22	59	29	57	30	55	29	65	28	65	31	66	31	64	28	56	33
6.....	68	29	71	25	68	35	68	39	64	37	52	28	64	34	64	29	62	27	76	26	71	35	75	45	75	32	69	44
7.....	68	48	70	36	60	52	62	52	61	50	62	47	62	52	61	48	65	46	71	29	64	48	71	36	67	37	59	50
8.....	54	41	55	35	55	35	52	33	51	29	56	31	55	33	58	35	52	31	57	37	60	42	46	39	57	46	50	32
9.....	41	23	46	27	35	27	35	30	30	27	33	25	35	26	47	27	32	26	31	29	37	31	35	31	32	29	32	25
10.....	27	22	32	26	35	23	34	27	29	22	29	20	31	23	31	25	30	17	31	25	40	18	38	29	34	29	29	28
11.....	38	21	38	17	40	15	44	26	37	20	36	15	38	15	40	16	39	12	43	13	47	22	51	19	45	15	36	19
12.....	47	19	61	16	67	28	69	37	64	30	59	26	65	30	66	29	64	30	69	17	55	25	71	27	68	20	63	29
13.....	58	38	59	47	63	51	62	56	63	49	60	51	67	56	65	57	66	51	71	20	68	35	65	45	68	35	59	52
14.....	57	40	59	48	62	47	62	48	49	43	59	40	60	42	59	47	51	41	56	51	65	42	65	55	63	58	59	47
15.....	57	32	50	38	58	46	62	51	48	39	49	24	49	40	55	45	42	39	70	46	72	53	70	51	70	50	67	46
16.....	45	34	47	39	57	43	51	42	43	37	42	34	44	37	52	40	42	35	57	47	50	44	55	55	56	50	57	43
17.....	45	26	50	30	52	40	58	42	47	39	49	34	54	36	53	36	56	32	60	41	68	40	65	43	60	43	52	40
18.....	58	36	63	32	68	42	66	51	64																			

TABLE 3.—Maximum and minimum temperatures for November, 1913. District No. 3—Continued.

Date.	Kentucky.						Tennessee.												Decatur, Ala. §§		Ashville, N. C.		Virginia.					
	Louisville.		Maysville. §§		Williams- burg. §§		Chatta- nooga.		Johnson City. §§		Knoxville.		Nashville.		Palmetto.		Sparta.						Waynes- boro.		Blacks- burg.		Wythe- ville.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.		
1....	48	31	54	24	45	24	54	35	57	24	51	30	52	28	55	24	66	53	56	25	56	31	52	23	58	18	51	30
2....	56	32	60	24	50	27	59	30	67	22	59	28	60	32	65	28	60	26	61	29	60	31	62	24	60	20	60	21
3....	64	42	64	24	65	26	68	38	67	29	66	35	69	43	70	38	68	36	69	35	67	39	68	32	66	23	64	26
4....	60	42	61	32	68	21	69	43	66	30	68	37	67	43	68	40	71	41	69	37	68	42	64	36	62	34	63	27
5....	58	36	53	27	68	25	70	45	70	31	66	38	65	38	69	31	69	29	71	31	72	40	63	32	62	23	59	28
6....	69	41	75	27	69	38	68	46	70	32	68	39	71	42	72	43	71	37	72	40	75	41	65	32	65	22	63	25
7....	60	51	67	30	71	37	70	53	76	31	72	44	68	52	69	50	70	53	71	53	76	53	68	32	68	25	68	29
8....	51	33	50	43	60	35	63	38	55	40	55	38	53	35	61	42	65	40	66	36	55	54	54	36	50	34	53	37
9....	33	28	33	31	56	30	38	31	32	31	38	28	35	28	42	26	40	29	40	31	40	34	36	23	45	24	37	24
10....	31	26	34	26	51	26	39	28	31	25	35	27	36	28	47	24	33	25	40	26	46	28	31	21	27	21	27	21
11....	40	28	42	17	42	15	49	22	40	21	42	22	47	23	50	17	42	15	52	18	49	22	34	21	27	19	32	21
12....	66	32	66	17	68	17	63	28	70	20	62	26	68	33	67	30	67	23	71	30	68	22	61	23	57	21	53	24
13....	61	51	58	22	70	39	71	39	72	34	69	36	72	53	70	50	70	34	73	50	70	31	71	29	67	32	63	33
14....	62	48	56	50	71	42	67	43	68	33	68	50	70	57	66	50	73	38	68	51	69	40	67	37	64	41	57	50
15....	66	48	59	42	72	48	73	47	74	40	70	50	72	57	72	50	73	40	72	50	73	41	68	45	55	41	56	43
16....	55	44	48	43	68	45	63	50	59	46	59	50	65	46	62	47	62	46	64	49	63	45	60	46	56	40	55	41
17....	54	40	51	41	65	13	62	46	60	39	58	43	59	45	63	40	60	44	65	43	61	47	59	41	56	34	55	36
18....	66	49	66	32	70	33	68	38	70	31	67	36	70	41	71	36	73	34	72	38	71	38	67	31	65	30	61	35
19....	72	57	75	43	75	49	72	41	70	32	70	42	72	50	73	48	72	35	71	40	72	39	73	38	76	32	71	42
20....	74	61	79	48	70	50	72	42	70	38	70	40	74	52	72	49	75	36	72	45	72	40	72	39	68	40	68	42
21....	73	53	74	40	71	43	72	44	70	37	71	40	74	49	74	48	78	42	73	46	74	42	71	36	73	34	72	35
22....	74	62	80	45	68	42	74	45	70	36	72	45	73	56	77	56	71	40	74	45	76	46	70	39	74	32	73	38
23....	65	42	61	53	60	29	75	48	65	35	70	45	66	44	71	50	69	47	74	52	76	52	68	41	66	35	66	42
24....	56	39	58	30	68	28	60	43	55	35	57	40	60	38	69	32	57	30	65	28	61	48	58	41	52	30	48	34
25....	54	36	58	25	70	37	60	41	59	27	56	34	57	40	64	29	63	30	62	30	65	38	61	33	55	25	56	30
26....	56	51	50	26	71	38	63	43	59	28	61	39	67	53	67	46	66	42	66	46	68	37	62	37	61	29	56	33
27....	57	51	52	45	70	43	68	45	63	38	63	41	64	51	71	49	65	40	69	47	70	45	65	39	50	36	52	43
28....	65	54	67	45	68	43	67	45	60	40	63	43	70	50	70	53	69	40	67	48	72	50	61	43	49	40	49	39
29....	66	57	61	49	65	40	61	55	60	38	67	45	64	58	65	56	65	51	69	51	63	53	66	39	51	41	60	38
30....	61	54	63	49	62	38	61	53	58	38	60	51	66	58	67	58	65	58	68	48	69	60	55	44	49	39	47	40
Mn....	59.1	43.8	59.2	35.0	64.2	34.0	64.0	41.5	62.0	32.4	61.8	38.7	63.5	44.1	65.8	41.4	64.9	37.8	66.1	39.9	65.9	41.0	61.1	34.4	57.5	30.5	56.5	33.6

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.

§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.